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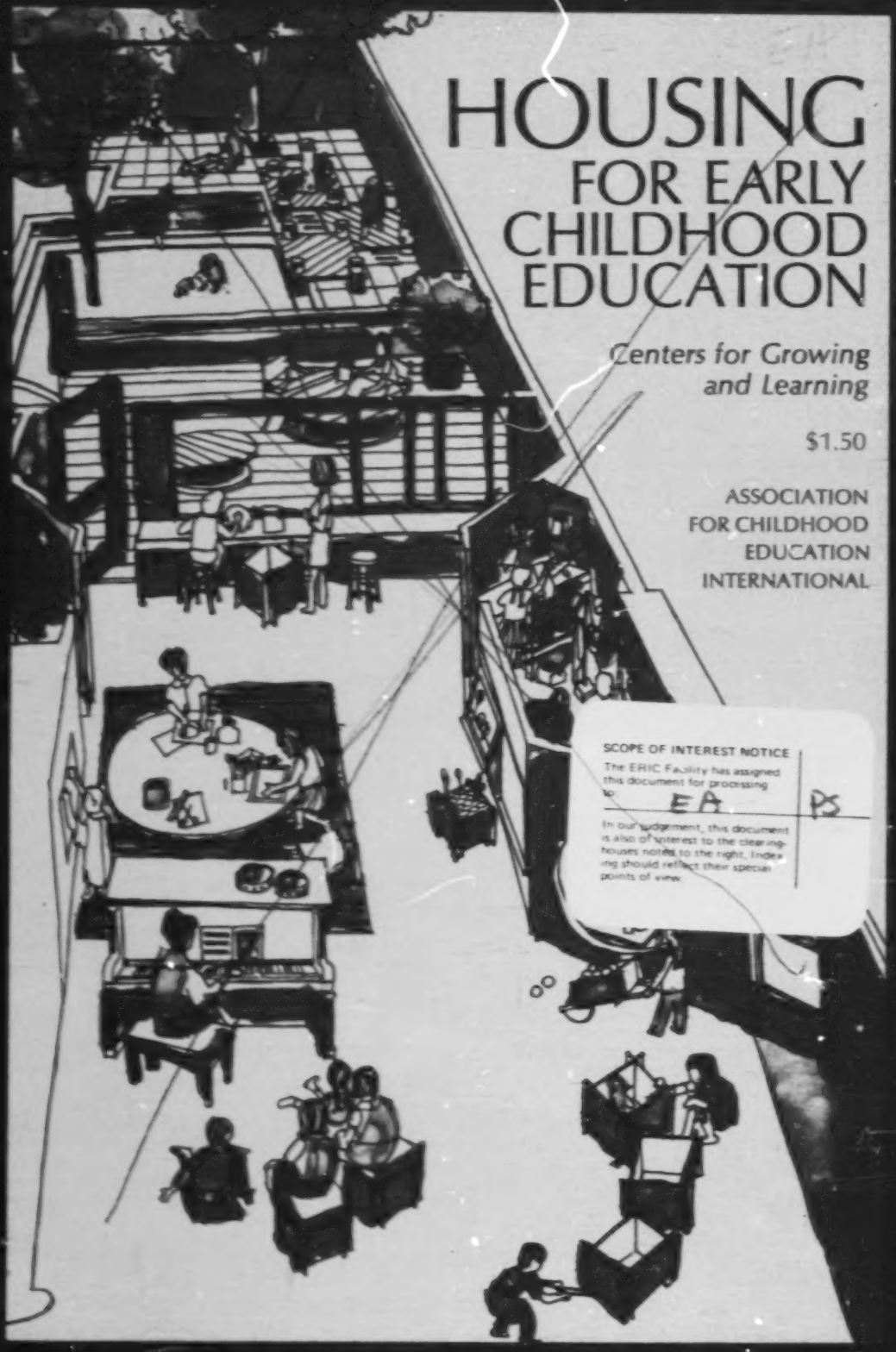
ABSTRACT

A collection of 18 short articles dealing with the planning of programs and places for early childhood education comprise the volume. The importance of the right physical environment is stressed as a catalyst that enables a child to receive the best that people and programs can offer. Among the design parameters discussed are indoor-outdoor relationships; the size and flexibility of furnishings; color, texture, and lighting; safety features; facility requirements; the effect on building design needs of climates in Alaska and Florida; remodeling; space classification; and developments in other countries. (Photographs, illustrations, and floor plans may reproduce poorly.) (MLF)



HOUSING FOR EARLY CHILDHOOD EDUCATION

Centers for Growing and Learning

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ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL

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This bulletin is the result of planning that began with an ad hoc committee meeting at the ACEI Center that convened at the suggestion of SADIE GINSBERG, National Committee for Day Care of Children, January 17, 1966, to consider the possibility of an exhibit on housing for young children. Those present were: MINNIE BERSON and DWAYNE GARDNER of the Office of Education; CORNELIA GOLDSMITH, Executive Director, National Association for the Education of Young Children; HELEN WIDMYER, Supervisor of Accreditation, State Department of Education, Baltimore; WILLIAM VOSBECK, AIA; and ALBERTA MEYER and ELIZABETH NETERER, ACEI. BETTY FOGG, Office of Economic Opportunity, was not present.

At a second meeting of the Ad Hoc Committee on Housing for Pre-Schoolers, June 1, 1966, initial members BETTY FOGG, DWAYNE GARDNER, ALBERTA MEYER, HELEN WIDMYER and ELIZABETH NETERER were joined by BECKY ALLEN, Parents Cooperative Preschools International; CLARK BROWN, Elementary-Kindergarten-Nursery Education of NEA; and BEATRICE SEBASTIAN, American Association of School Administrators.

In August 1966 the ACEI Executive Board decided that from the study of the Ad Hoc Committee the desirability of publishing a bulletin on this subject be indicated to the ACEI Publications Committee and that it have high priority on the publications list.

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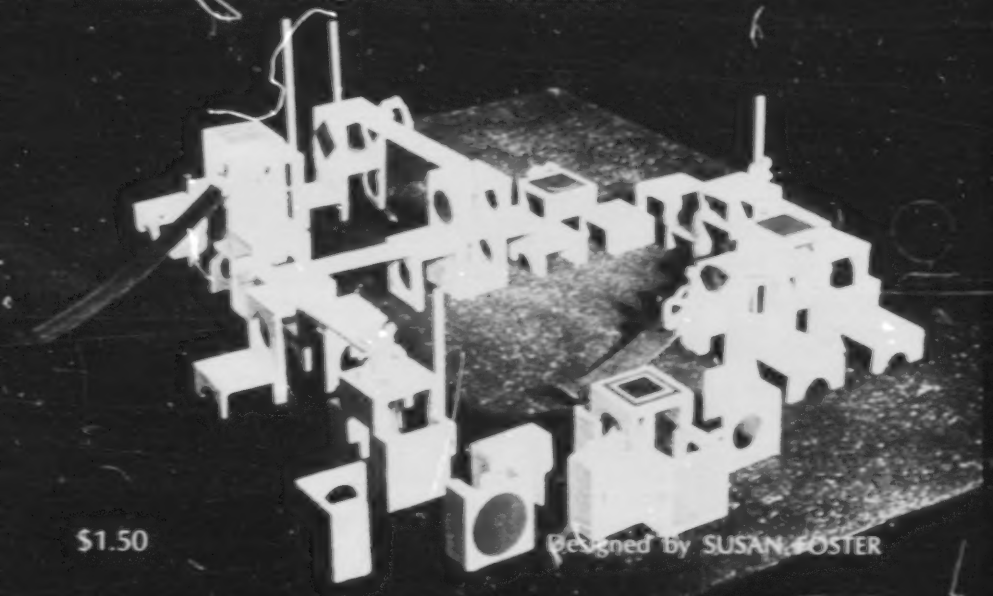

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Centers for Growing and Learning

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Donald L. Harris, photographer

An Ideal Environment for Learning

by *DWAYNE E. GARDNER*

*Dwayne E. Gardner is chief, Program Management Branch, Division of State Agency Cooperation, Office of Education.**

Excellence in early childhood education demands thoughtful planning of programs and places, for people. As in all educational endeavors, human needs must govern programs and facilities in the creation of an environment for learning.

The physical environment should be comfortable, spacious and stimulating, enhancing the relationships among children, teachers, parents, administrators and the community. Working together for the benefit of the child, family, community and staff should be supported by an optimum physical environment reflecting the early childhood program. Unquestionably, the facilities will not obstruct teaching and learning but will provide the proper setting and the necessary tools to encourage each child to do his best.

Quantitative and qualitative factors, as well as the organization of space, constitute the physical learning environment. Space of sufficient size and with appropriate dimensions is the quantitative requirement. The environmental treatment of the space and the proper use of equipment and materials make the qualitative factor.

Design Important to Learning

Greater distinction in design is needed between facilities for very young children and for those in the lower elementary grades. Essentially, as the nursery and kindergarten school is an extension of the home, it should, therefore, ideally be located nearer the child's home than would an elementary school and would reflect the image and the scale of the home. Here, children and adults will live, play and work together; here children may learn and grow.

The child's living-learning experience is most meaningful when his environment responds to his needs. Physically and psychologically, the child is quick

* This article was written by Dwayne E. Gardner in his private capacities. No official support or endorsement by the U.S. Office of Education is intended or should be inferred.

to react to environmental conditions. Because of the influence upon the child's attitude, space and color, texture and light ought to be used to provide an appropriate learning atmosphere and guide the behavior of the child. Too many of the existing early childhood learning spaces are flat-floored, flat-ceilinged boxes, devoid of any stimuli for work and play.

Proper and adequate facilities will accommodate a learning program that becomes part of the total educational enterprise, accepted and integrated as an important and necessary experience for all. Whenever it is needed or would be useful, the school building or learning center should be available to the community. Such additional use may require some modifications in initial design or would have to be taken into consideration in remodeling plans. Modifications must accompany, not detract from, improvement.

In many cases undoubtedly, facilities could be chosen that are better suited to the educational program, but there is a danger of overdesign. A viable facility cannot be tailored to a program, but must allow for modifications resulting from changing goals, emphases, curriculums, communities and personnel or just for the changes stemming from the inventiveness and imagination of the competent teacher. Thus the physical environment remains responsive to changing needs and needed changes.

The early childhood facility essentially is a place of freedom—freedom for the child to be himself, yet to achieve self-discipline; freedom to experiment and investigate; freedom to try many things, to do them poorly, and to make mistakes at least once. Permissive and pleasant, the atmosphere will sustain, without serious disruption, the varying moods of room situations: happy and austere, joyful and serene.

There will be a place for playing and space for contemplation; space for groups of differing sizes and space for privacy. The facility might include many shapes and spaces, tall, low, large and small, and with this spatial variety, a variety of finishes and materials. Materials will not all be durable, antiseptic and unyielding. With such variation some materials will be hard, some will be soft, will give, will be pleasant to touch, feel, look at. Nor need the space be immaculate. Indeed some messiness may be desirable, for an obsession on the part of an adult for orderliness may inhibit initiative and kill creativity. The facilities for early childhood programs must be relaxed and comfortable.

Such qualitative conditions as illumination, heating, cooling and ventilating and acoustics, should be of greater concern. Although we do not yet know as much as we should about good climate control for children, research is continually providing new and more relevant information.

Surroundings should inspire, please and satisfy their occupants. Since most occupants are children, the physical environment should be child-oriented and child-sized.

Space: organization, flexibility, accessibility

The primary ingredient for a quality learning environment is space. Space with appropriate dimensions, not the brick and mortar, is the heart of a good living-learning environment. The organization of the space, the placement within of centers of interests, dictates the flow of the learning activities. A well-organized and efficient space reduces confusion, disorder and discipline problems. Thus, sufficient areas are program-organized to accommodate the learning activities in a functional manner.

Again, the physical environment should support and enhance, not restrict, all learning activities. Since the activities will change frequently, flexibility in the design and organization of the space is needed to permit easy adjustment to these changes. Flexibility means more than just being able to move some partitions or visual screens; the mechanical services—heating, cooling, ventilating, lighting, plumbing—also must be subject to alteration. Too much flexibility, however, leads to a lack of commitment and character.

Versatility of spatial and environmental factors is inherent in all good architecture. Variations in scale, volume and texture not only guide attitudes but channel enthusiasm along appropriate patns. Thus the young child is made aware of, and responds to, these variations. He feels free to skip and laugh in permissive open areas where floors respond to the beat of feet; yet he is quick to adjust to the quiet and contemplative activities of individuals and small clusters of children.

Adaptability is a highly valued characteristic of the physical environment. The early childhood program requires that the site and the space, as well as the furniture and equipment, be so adaptable as to permit activities to expand shrink, disappear completely or even move outdoors. Portable or movable furniture permits rapid changes. Likewise, when space is designed to facilitate movement, carts, cabinets, screens, bookcases and work tables can all be made part of an easily modified setting that takes on new dimensions as new demands are met.

Space and its contents should be accessible. True, the design of space must be versatile and flexible and the furniture and equipment within it adaptable to changing needs, but, most important, the principal resources—the learning tools—must be immediately available for use, with objects and materials displayed to invite use and spark interest and curiosity. Overly complicated objects or those things in bad repair, or things simply out of reach are likely to frustrate the child; an overabundance of materials in one location tends to overwhelm rather then to stimulate him. An independent, self-stimulating environment can be achieved only when children are able to reach objects of choice and spontaneously commence their activity.

Although, in considering making maximum use of available space, it is found

that some areas can be used for more than one type of learning activity, it is prudent to remember that the nature of the instructional program for the beginning child is such that only infrequently can the same area be put to multi-use.

A learning environment wherein it is recognized that simplicity and beauty are compatible with functional use of space, and that they are important in contributing to the emotional fulfillment of each child, permits both educational utility and aesthetic satisfaction. The fluid quality of space with an appropriate use of color and texture becomes a learning tool.

Safety measures are more than the basic protection from harm by fire, protection from traffic and other modern hazards. Those who design and organize space should give due consideration to the health and safety of each occupant. The requirements of the physically handicapped should receive particular attention so that these children may be comfortable and independent.

Many acoustical problems may be anticipated because of the great variety of activities that take place simultaneously within the same space. Yet it is possible to determine, within reasonable limits, those materials, shapes and conditions that produce good acoustics. Much of the unwanted noise can thus be dissipated at its point of origin by using materials with good acoustical properties.

The human body does not adjust readily to extreme variations in temperature. Proper balance, uniformity, and control of the physical environment through good heating and cooling devices increase the physical comfort of the occupants. There is reason to believe that good temperature and humidity control increases the productivity level of children. Since it costs more to cool air, there is a tendency to close in the space, make it more compact, increase the insulation, reduce the perimeter, and reduce the amount of window area. Rightly, however, cooling of the space should not be bought at the expense of other amenities and human needs.

Visual comfort, compatible with the task, results from many factors other than the quality of footcandles and the level of illumination. Although the use of artificial illumination has become more prevalent, it is considered important still to have controlled daylight. The ability to see outdoors may have some effect on the emotional and psychological development of children. We should not be too quick to separate ourselves from the natural environment. Nor should we avoid the variation in lighting and temperature which may be necessary for the best results in the learning process.

Wherever possible, space should be arranged to permit simultaneous indoor-outdoor use where the teacher can supervise groups of children in both areas.

The physical environment of any early childhood setting must not only contain quality and quantity of site, facilities, equipment and materials, with serve the neighborhood as a whole.

I PLANNING STARTS WITH A PROGRAM

Space Which Allows

by *RONALD W. HAASE AIA*

This article is based on a booklet soon to be published by the Head Start Division of the Office of Economic Opportunity. Mr. Haase is co-author with Dr. Dwayne Gardner of the U. S. Office of Education. The accompanying illustrations are from the booklet.

People and program are the first requirements for successful early childhood education. A skilled teacher and a sound concept of child development are the essentials. But a third element—the right physical environment—can be a catalyst which enables the child to receive the best that people and program can offer.

Too many educators and architects have come to the unfortunate conclusion that the flat-floored, flat-ceilinged, ceramic-tiled antisepsis of our typical urban/suburban schoolhouses is the accepted and irreparable setting for education. Any space which is economical to build, easy to maintain and relatively free of inconveniences is considered a suitable meeting ground for teacher and student. There is, however, a growing number of those who believe that this meeting ground can be a positive rather than a neutral force, that the "place" of education should function to free the teacher to teach, to allow the program the flexibility necessary for constant innovation and improvement and to enhance every child's chances for maximum benefit from his years in school.

Specifically, in an environment thoughtfully designed for early childhood education the very doors, walls, floors, furnishings and fixtures can provide direction, suggestion, stimulation, protection and even comfort, motivating the child's curiosity and creating the potential for learning.

The early childhood education center is the place where the child begins to grow beyond family and home and where he encounters those experiences which contribute to his awareness of himself as a member of a larger community. The location of the center must therefore be accessible to the residential community it serves—convenient, obvious and inviting. Ideally, it should be within walking distance along safe streets. An alternative is the provision for safe delivery by private car and proximity to public transportation.

The outdoor play areas must be protected from the noise and hazards of street traffic and from the more exuberant rough-house of older youngsters.

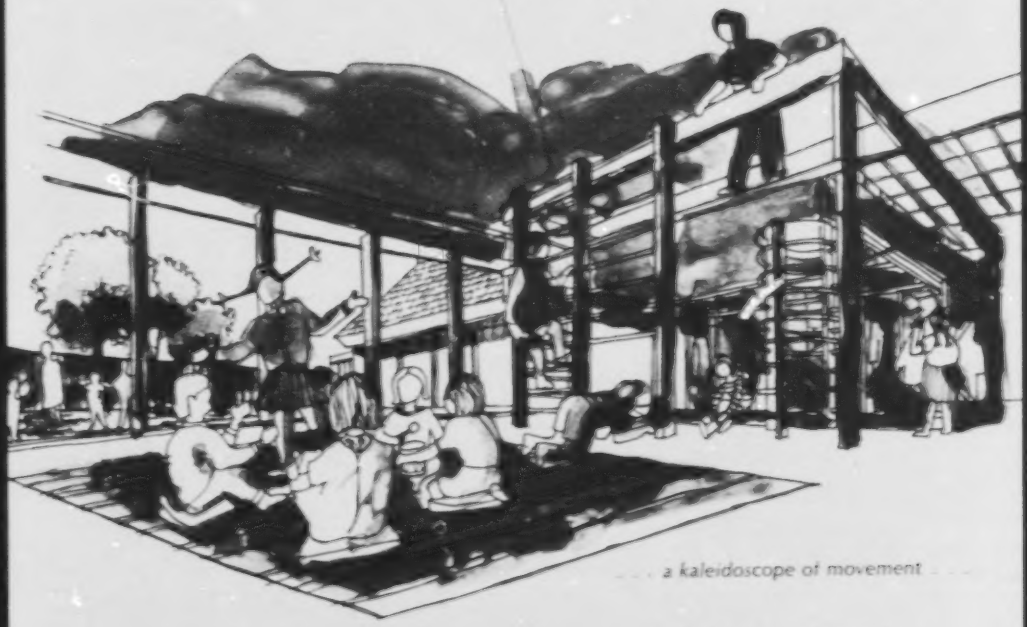
Ease of supervision and ease of access from inside are important not only for security, but also to increase the usability of the outdoors as an extension of the indoor learning areas.

The many facets of a well-rounded child development program are best served in a single structure or—when the program is an integral part of the public education system—in a separate wing or connected pavilion of the neighborhood elementary school. The special needs of very young children require an environment and a scale specifically designed to accommodate them. The early childhood education center should have a visual and esthetic quality of its own so that the child it serves can quickly identify it as "mine."

A Kaleidoscope of Movement

Almost every indoor work and play experience is equally appropriate, and sometimes more effective, out of doors. In addition to being safe and accessible, the outdoor area should be varied in texture and open to both sun and shade, providing a variety of kinds of areas from a quiet covered terrace to an open sunlit mound. The equipment and structures for outdoor play must, of course, be safe and durable. More important, they should be abstract or neutral, allowing the children's own imaginations to supply the details which transform a simple tunneled mound from a highway toll booth one day to an Alaskan igloo the next. Turn-taking apparatus, dangerous swinging objects

A simple tunneled mound is a highway toll booth one day, an Alaskan igloo the next



. . . a kaleidoscope of movement . . .

and dull, single-use equipment are too monotonous for daily use and frustrate the child's ability to structure his own play. Climbing, jumping, sliding and crawling through can all occur in a kaleidoscope of movement when the outdoor area is designed as a continuous playscape rather than a collection of isolated objects.

Visual Clues

A child's response to his environment is far more direct and energetic than an adult's. He is constantly making discoveries about highness and lowness, nearness and farness, hardness and softness, light and dark. The physical objects through which he explores these concepts can stimulate his imagination and reinforce his joy of learning. Space itself, color, texture and light quality influence a child's attitude and can provide visual clues that guide his behavior. A little bit of height is a mountain top from which to survey his world, and the dark place under a desk is a lair in which he plots the private adventures of his day. A sliding pole is for finding out what firemen do, a climbing platform for pretending you're a monkey. Subdued acoustics and soft surfaces mean a quiet place for quiet pursuits. A colored circle or shiny metal disc on the floor mean pay attention to whoever is standing here or stand here when you have something important to say. A big, soft comfortable teacher's chair can take on many meanings. It is a link with the familiar surroundings of home; a reminder of the presence of a friendly adult; and a

Drawings on pages 8, 9 and 10, and on cover, courtesy Office of Economic Opportunity

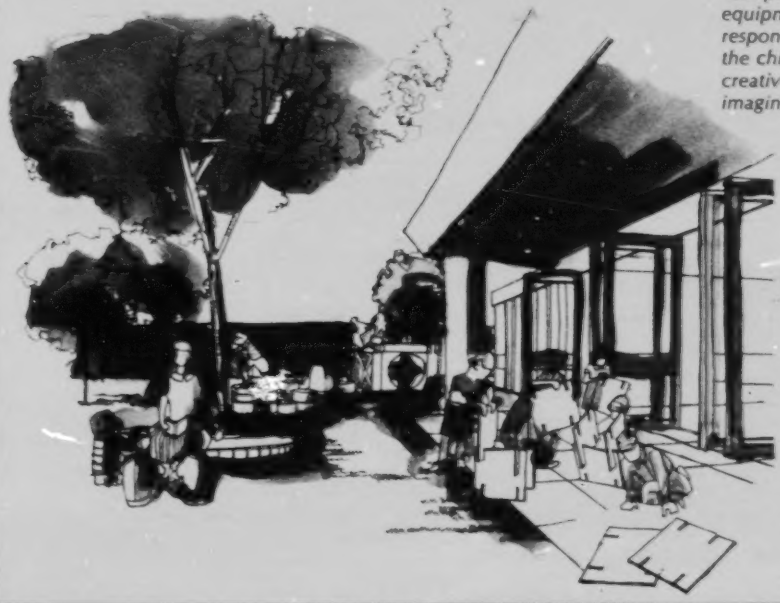
place to go for refuge, for reward or for finding out how big being grown up is.

The whole range of spatial scales—from big, bright, booming spaces where hard floors respond to the slap of feet to quiet, low-ceilinged, tuck-away alcoves for special conversations—can be provided in a well-planned living/learning environment.

Furnishings and equipment for the indoor classroom, like that for the outdoors, is too often overelaborate, oversophisticated and limited to a single use or activity. Furniture must be simple and versatile to facilitate the quick and frequent shifts of mood and activity that occur in an early childhood center. Movable shelving units are also room dividers. Block storage bins on wheels become hauling trucks or link together to form a train. Informal, easy-to-carry floor cushions take the place of chairs, and a simple carpeted step is a natural workbench.

Just as immovable and single-purpose furniture restricts expansion or change of activity, inaccessible or single-purpose equipment inhibits curiosity and imaginative play. Materials should be temptingly displayed—like wares in a market—sparking interest and inviting use; and never be overcomplicated, hidden by clutter, in bad repair or simply out of reach because an adult inadvertently forgot about the height of a child's eyes or the length of his arms. Simple and versatile equipment responds to the child's creative imagination. A set of slotted boards or an empty packing crate can provide hours of delight, while a repetitive device soon becomes boring and frustrating.

The right environment, the right stimuli, the right space and the right physical components of the space can be the result when the early childhood education center is thoughtfully conceived, sensitively designed and properly equipped.



"Simple, versatile equipment responds to the child's creative imagination."

Travel Agent

by *ALLAN LEITMAN*

Allan Leitman is director of the Early Childhood Education Study at the Education Development Center, Newton, Massachusetts.

America needs adults who think for themselves, adults capable of retaining their identity against forces of automatic production and consumption. Skills that we were trained in during our school years help us minimally to withstand these assaults on our values and identity.

An individual's education should be an open-ended quest for understanding and harmony with his physical, social and personal reality. It should be a subjective, nonstandard, personal, human mixture that makes the most sense for him. The school can work with a family and society to help an individual gain skills in expressing his identity within the real limits of a classroom. The acquiring of communication skills—listening, language, speech and reading—is unique for each person. A pattern of variation and choice must be built into the school.

A teacher of young children is, in a sense, a *travel agent*. He helps a child go where the child wants to go. He counsels on the best ways of getting there, indicates the kind of currency and the rate of exchange, the necessary "shots," the books that will help the traveler understand what he sees. He warns that some places are too dangerous or too difficult to visit just now.

A teacher must have professional discretion and range enough to help each child become a self-sufficient traveler. The young child in school should first learn the pleasure of all the things that he can do. How the child feels about himself is really what is important! The child who likes himself can afford to like others. A teacher will be more able effectively to direct a child to new areas when the child is committed to his own education.

A teaching career begins in an intuitive way. The teacher learns about his profession slowly as he practices it. In time he will be able to find structure and pattern in what he knows. Of course, he will want access to every aid and point of view that he can use along the way. In the end, though, it is personal experience and the pleasure in work that keep both teacher and student growing.

At the Early Childhood Education Study* we are sponsoring workshops, making films and working on new kinds of classrooms. The project was established in August 1967 under a contract from Head Start, Office of Economic Opportunity and we are involved in shaping the places in which teachers teach and the materials with which they teach. We are concerned with what happens to a teacher when he has a strong hand in shaping these areas. Today, the polarity of opinion between the affective and cognitive cults within educational circles makes it important for teachers to be secure enough in their own knowledge to make quickly and easily the many decisions that must be made. The teacher cannot always wait to reflect upon the necessary steps; he must be decisive.

Teachers have generally been the passive people on the bottom whom architects, administrators, principals and supervisors have manipulated. Teachers must set the tone, shape the environment, and bring to their pupils the things with which they want these children to deal.

Early Childhood Education Study is acting as a bridge between the persons who want educational spaces for children and the persons who shape those spaces. A new kind of interaction must take place between teachers and architects. The educator will have to take an active and dominant role in making the kinds of spaces necessary for his program; the architect will be obliged to learn how to help an administrator and teachers express their philosophy and implement their first program, in the models and then in the specifications that will make the space that is right for the program.

ECES is now working with 1) Falmouth, Massachusetts, Head Start, to help the community develop an adventure playground; 2) Parents' Improvement Council of Los Angeles and Pacific Oaks College in Pasadena, California, to design a new two-class Head Start building; 3) the faculty for the experimental KLH Day Care Center in Cambridge, Massachusetts, to develop a class program in an old factory space; 4) a teacher in a Head Start classroom at the Hilltop Center in Boston, Massachusetts, to reshape her storefront classroom; 5) the public schools of Philadelphia, Pennsylvania, to build a new kind of classroom; and 6) Tennents Harbor, Maine, public school to help design a new kindergarten.

Teaching is a lonely profession. Once the door to a classroom closes, the teacher is surrounded by a world of children. He has a real need for communication about teaching with other involved adults. This kind of communication should take place in a comfortable, informal atmosphere—a neutral ground away from the schools—a place where people go because they want to.

It is in this light that we have created a workshop where people can come—teachers and parents—and make things that go back to their children's

* ECES

"The young child in school should first learn the pleasure of all the things that he can do."

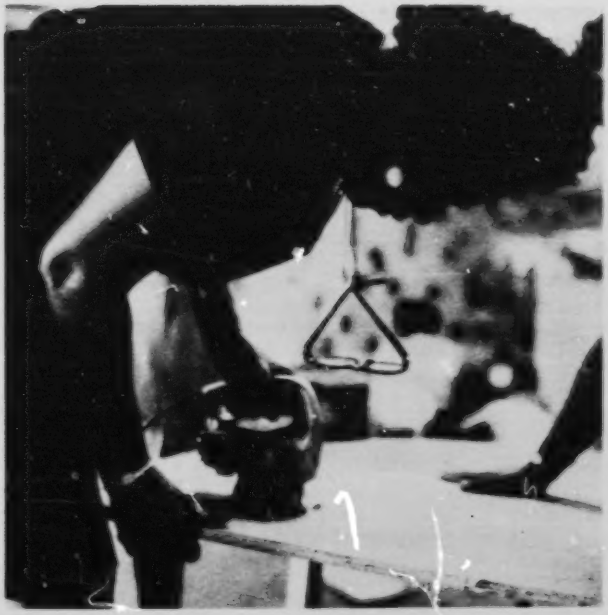
classrooms, useful things that will help the children to learn. More important than the product is the factor of starting a process where teachers and parents with their own hands make things that are of value to children.

Nuclei of Learning Centers

ECES has already established six workshops. In Los Angeles, Mel Suhd, in cooperation with Pacific Oaks College, is working with Parents' Improvement Council in what has developed into a storefront college. Head Start teachers, parents, aides and some public school teachers receive credit from Pacific Oaks College for a once-a-week course in which materials are developed to be used in their classrooms. Working with metal, wood, cardboard, cloth, food, and a variety of "scrounged" materials, teachers and parents are creating, in this Manchester Avenue store front, things for children's classes.

In Newton, Massachusetts, there is a workshop open to teachers, parents and students in the Boston community, where materials are developed for use in the classroom.

Wheelock College, Boston, Massachusetts, and ECES are sponsoring workshops for Massachusetts Head Start teachers and aides.



". . . a workshop where people can come—teachers and parents—and make things that will help the children to learn."

Photos courtesy Allan Leitman

ECES and the Philadelphia Public Schools have established a workshop in the Jackson Public School. Donald Rasmussen is working with teachers from public schools and some Head Start teachers making materials for their classes. In New York workshops are being organized.

These workshops serve as places where persons can both make things for children in schools and develop their own crafts and skills while meeting and talking with others about problems of mutual concern.

Workshops can help teachers in two ways. A teacher can create and build things for the children he teaches, things which will forward their learning and growth. In this process a teacher will learn the feel of construction and invention and support this process among the children of his class.

Not by Words Alone

Teaching how to teach by talking presents difficulties. Just the interaction between children, with all its endless permutation, makes talking about teaching a difficult business. Words have certain value, but it is impossible to put this complex situation into the proper words. Both the teacher and the student teacher use words and language from a unique point of view. One's experience strongly shapes the meaning of words. A teacher cannot relate his experiences to his pupils through words alone.

Let us be suspicious of words used in talking about education, suspicious of thinking that a sufficient number of the right kinds of words aimed at a person will make him a teacher. Our lives are filled with words but often with very little real understanding of the physical reality that these words might be describing. It is better to have children primarily involved with the physical reality as the basis for the words that they use and the ideas that they have. Language can be traced to a real event. If there is any ambiguity or question, the child and teacher can go back to the specific physical environment and look at the problem. "It really balances when that piece of wood is there!" This is a good place to start with children.

One of the things we are trying to do is to film the ethos of a particular classroom, what it really looks like. A teacher holding a camera captures his unique view of a classroom. Those who receive that subjective view from the film will at least start a discussion that is based on the same thin band of information. People who are working with young children will have a common reference point against which to sharpen their communication.

We are beginning to film documents on three-, four-, and five-year-olds in school that will help teachers, parents, and other interested professionals understand the range of complex problems involved in working with young children.

One kind of film that we are developing is of a series of fifteen visits to one single classroom in the course of a school year. We are perfecting techniques to enable us, as we listen to children talk, to capture some of the elements of their social and intellectual development over the year.

Workshop Classrooms

ECES supports a workshop spirit in classrooms in the elementary school. The teacher, classroom materials, curriculum, children and community affect and depend upon each other in the workshop classroom. The material a child studies helps him to achieve the goal he has set for himself. A teacher, as a travel agent, needs to feel free to call for help and consultation when a pupil embarks on a reasonable but new direction. What is valued in this classroom is the pleasure of learning, the pleasure of picking up and using a skill that is directly useful, the pleasure of conceiving, planning and building productions in the arts, sciences and crafts.

It will be a long time before a workshop classroom is valued as a basis for public education. In the interim we can help teachers have experiences that expand their expectation of what it is that a teacher is and does.

Town & Country Day School, Silver Spring, Maryland
Chapman & Miller, architects
Robert C. Lautman, photographer

A space sequestered but not shut in with movable walls

Module for a playground, M. Paul Friedberg & Associates, Landscape architects, New York

Katrina Thomas
photographer

Preschool Educational Housing

by *CHARLES DANA GIBSON*

This article is extracted from a speech made by Charles Dana Gibson, Chief, Bureau of Planning, Department of Education, State of California, at the Sixteenth Annual Conference of the California Children's Centers at Sacramento, May 27, 1966. Mr. Gibson opened his talk by referring briefly to his own part in the establishment and operation of the Lanham Act program of child care, an act of the Federal Government which arose to fill a need for child care centers for children whose mothers went out to war-time employment.

The housing for the Lanham Act program of child care was designed in Washington, D. C., and handed to State and local officials to approve without question. In California the designs of the buildings did not meet the structural formulae required by the State for the design of "regular school facilities." Again, the crisis of a nation fighting a losing war* over-rode normal planning and construction procedures. Child Care Centers were erected on elementary school sites hastily and with very little studied consideration of whether or not they met program needs. At least they represented enclosure and shelter with a few amenities. They were accepted and used in the name of the emergency they represented. Probably it would not be fair to be too critical of any facilities provided free under those crisis conditions. The nearly unforgivable mistake we made as we continued to carry on wartime and post-wartime preschool programs was that we never looked back. We came to accept such housing—and much worse—as adequate for the programs. In fact, if anything, our facilities down through the years generally have become worse and worse. We accepted the heritage of taking whatever we could get and doing the best we could with it. In my opinion, it is high time we make a valiant and determined stand to correct this untenable situation.

Assuming we really have a concern about the housing phase of the Children's Center program, how could we begin to improve the physical facilities it uses?

Centers for Special Programs

First, it would seem wise to look at the progress other special programs

* World War II

have made in obtaining adequate physical plant. The field that comes to mind at once is that of Special Education. This program began much later than yours,* today most of the nine phases of Special Education have housing standards set up in Title Five of the California Administrative Code. Specific space and equipment rules and regulations have been set up for such programs as the Trainable Mentally Retarded; the Educable Mentally Retarded; the Educationally Handicapped; the Blind and Partially Seeing; the Deaf and Hard of Hearing; the Orthopedically Handicapped including the Cerebral Palsied. Each of these programs set up a formal statement of their history, objectives, activities. These then were translated into the space and equipment necessary to meet the objectives and carry on the activities. Thus the facilities required for a good program were documented in detail.

A thorough documentation of this nature makes it possible to show just how the right kind and amount of space and equipment are necessary if the objectives of the program are to be met.

In reviewing real instead of inherited housing concepts, we should question the location of Children's Centers. Crises in the form of limited supervisory personnel, imagined economies, and limited facilities dictated the placing of all phases of Children's Centers on elementary school grounds.

Can it properly be assumed that the elementary school site is the best location for preschool programs? Theresa Mahler in her brief on California Children's Centers explains the elementary schools as locations for centers on the basis that

1. Suitable space and facilities were available on elementary sites;
2. Regular school personnel is available to assist in the training and supervision of the preschool teachers.

These reasons may be valid for the elementary school program, but what about the preschool program?

How well does the elementary school setting and the physical spaces it provides satisfy the needs of a care and educational program for the very rapid development of the children from two to five years? At two the child has few, if any, social skills and tends to play entirely alone. By the time he reaches three he will begin developing social contact with other children. His social world continues to expand until at about four or five he may have from forty to fifty personalized playmates.

During this growth and development period, he is both a simple and a complex human being. Perhaps these are the most formative years of his life.

What Part Do Teachers Have in Planning?

Has the academically oriented elementary teacher or supervisor ever been a vital force in assisting Children's Center staffs to understand and help the

* Children's Centers

simple yet complex two-to-five-year-old identify himself as a social entity with rights, privileges and responsibilities both in terms of himself and his peers?

Who should be dealing with the social-academic care aspects of the elementary school child except the elementary school staff? Before-and-after school programs for the elementary school child perhaps should be explored as an extension of the regular school hour program. Regular elementary school staff with an enriched and extended individualized program for regular students in the school would seem best able to provide the guidance, supervision and assistance the older Children's Center enrollee might require.

Pre-Structured Domination?

One of the great strait-jacketing factors in American education is the limiting effect one element of our educational establishment has on the other. The universities and colleges, through entrance requirements, practically dictate the instructional content format of junior colleges and high schools. The junior high school is a content- and space-duplication of the senior high school. Both secondary institutions dictate to a large degree the instructional content and patterns of the elementary school. Should the pre-elementary program be structured to meet the individual needs of attending children or to meet a pre-set pattern of activities geared to the elementary school curriculum and to pressures and limitations of an underdeveloped, generally crowded site?

The program for Children's Centers, dealing as it does with the most formative and impressionable years of a child's life, should not be inhibited and prestructured by any other phase of educational establishment. A children's center program should not be housed in hand-me-down space with castoff equipment but have its own vital, particular program and needs for facilities met by an informed public on a firsthand, first-rate basis. Such miracles do not just happen. They must be brought about by those who understand the challenge and labor unstintingly to meet it, who believe with conviction that the physical facilities are an integral part of any educational or care program. The nature of the facilities determines almost completely the kinds and amount of space available for activities and services as well as their relationship one to the other. Space design controls such important factors as the adequacy of supervision of individuals and groups, the number and types of activities and experiences that can be provided for children, the degree of orderliness and convenience with which these activities may be carried on, the accessibility of areas, the possibilities for multi-use of space, the simplicity and directness of traffic patterns, how well children and adults see and hear, and the degree of physical and emotional comfort of the occupants.

The physical facilities in which we place children are factors in the formation of their growth and development patterns. The physical environment in

which we surround formative human beings determines to a considerable degree the energy supply they have to grow, play, work, listen, fight infection, digest food, climb and run; to live.

Although the physical facilities portion of your program represents a rather large initial investment, it really is the least expensive. When good, adequate facilities are amortized over a forty-year period of use, they represent only eight to twelve cents of the total dollar spent for the program.

Temporaries Stayed Too Long

The structures erected in the early days of the Lanham Act were the result of crisis and may have represented progress in terms of the construction materials' restrictions and design concepts of that time. They were constructed from materials meant only for either a short life or high maintenance. After all, it was assured the war would not last long and women would go back home and take care of their children themselves. Of course, only one of our assumptions turned out the way we thought it would. We did win a prolonged war. The women, however, came to work in ever-increasing numbers and the flimsy, high maintenance buildings stayed on, many of them to disintegrate into structural, health and program hazards. Facilities provided since the Lanham units have proven to be very little better, if any.

Variety and Flexibility Today

Today we have the greatest array of building materials and construction techniques the world has ever seen. We are not limited to narrow structural spans or any fixed geometry or area of space. Now we can study the best way of meeting our program needs and design the building to complement and support them. Probably the best feature of modern design is that after we decide what we want, build it and then find through change of program or personnel that some other interior space arrangement would serve us better, we can rearrange it quickly and for no more cost than a few man-hours of work. Friday, a decision to rearrange the space into a different pattern of rooms; Monday, it is finished. All can be accomplished in off-scheduled hours by a limited crew.

Expediency Again!

One of the saddest parts of this story is that again, in the name of a real or imagined crisis, we are now repeating our old mistakes. Truly, we learn nothing from history. We now are in a frenzy to provide housing for a batch of new preschool programs. Head Start, Title One, etc., require facilities. The crisis? We must get the programs organized, staffed and housed day before yesterday. This time the money problem is in reverse. Now we must spend

the rather generous pile in a too-limited time or lose it. And after all these poverty stricken years we aren't about to let Uncle Sam have his bucks back!

So again we see sensitive educational programs being pushed and crammed into ill-fitting, crude, rough, and, in some cases, dangerous space.

Planning With Help

Let me talk to you for a few moments about the kind of housing I think your preschool program deserves, the kind that can be a reality instead of a dream. The first criterion for the location of a facility should not be administrative convenience or saving plumbing costs. Physical facilities to house a well-defined, well-executed program for children will not be limited to formalized school settings, but will be found in individualized, thoughtfully developed settings appropriate for achieving the child development ends you seek. With careful planning and more cooperation than heretofore from elementary school officials, preschool facilities featuring well-designed outdoor and indoor facilities could be located on elementary school sites. No doubt many will continue to be so located. However, in the future, Children's Centers (or whatever we may call them then) will be located wherever you find them, wherever they can best serve their purpose. Well-spaced, well-equipped, well-staffed centers under the direction and supervision of school districts will be found in apartment complexes, condominiums, factories, shopping centers and department stores.

Specialized Spaces, Flexible Equipment

The facilities themselves will be designed around any given set of program needs and will lend themselves almost as moods dictate easily and economically to rearrangement. Specialized spaces will be provided for the successful operation of all the child-centered and adult-centered facets of your program. There will be space for individuals and groups to play and work, prepare food, have conferences and rest, the best possible setting for each activity.

The activities of your program rather than the rigid space area and geometry of a typical elementary classroom will determine building design. As program activities suggest or allow, there can be single-level or split-level space, stairways and balconies, mezzanines or whatever is needed and practicable for creating exciting space volumes. Some types of equipment such as slides, bars, climbing structures can find room indoors. (The entire facility could be designed to resemble a circus tent.)

The outdoor areas will be designed with the same care as the indoors. The transition from one area to the other will be fluid and simple. Instead of a sea of asphalt, outdoor space will have a variety of surfaces. Wherever possible, we will use the adjacent natural environment, hills, valleys, streams to

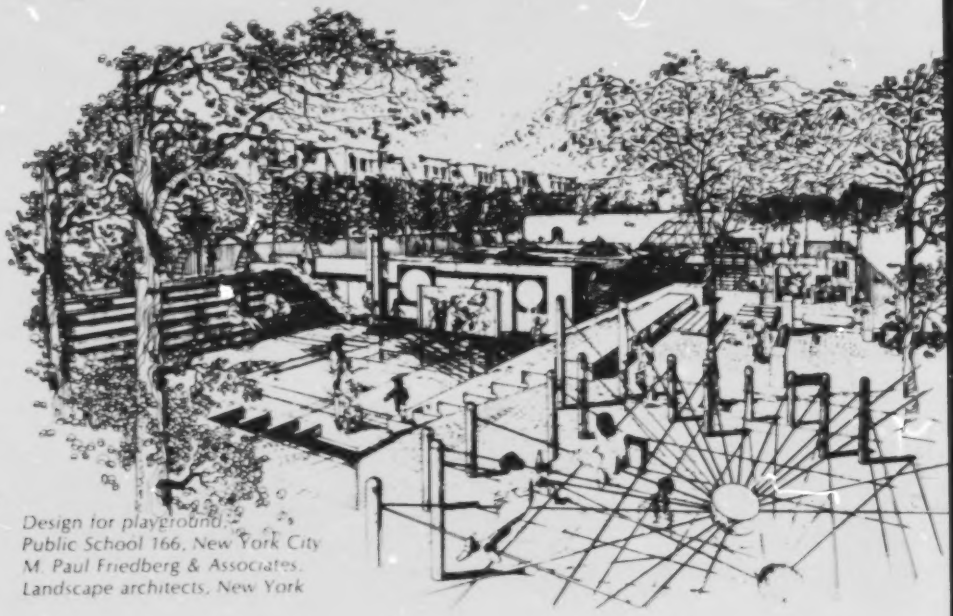
create dramatic changes in elevations and extend the young child's spatial experience.

Texture Too

We will explore a world of texture both indoors and outdoors. There can be many sorts of wall treatments, smooth and rough surfaces, soft and hard. There will be a minimum of asphalt. Rather, there will be dry sand and wet sand; grass and brick areas; stone, concrete and tanbark areas—in fact, all the various types of surfaces normally found in the vocabulary of a good landscape architect. We also will explore the world of color—not as an adult sees color in sophisticated and subtle contrasts and pastels, but as a child sees color, in a full spectrum of bright, vibrant hues. Of course, ideally all indoor space would be air-conditioned and carpeted.

The potential variety in facilities for preschool programs is unlimited. My suggestions represent but a few of those possibilities. It is, moreover, too much to hope that an architect, armed only with general information regarding preschool programs and facilities desired, could design appropriate and workable spaces for a given program in a given setting.

Suitable housing for preschool children, as for regular school pupils, can be provided only when a properly constituted planning team, including program, financial, educational planning, architectural and engineering specialists, give the time and effort required to understand fully what is expected of the facilities and to establish firmly the design priorities necessary to create a complete and balanced solution.



Design for playground, Public School 166, New York City
M. Paul Friedberg & Associates, Landscape architects, New York

Nursery School Facilities

by *JOHN A. SHAVER*

The itemized list which follows is the contribution of John A. Shaver, partner, of Shaver & Company, architects, Salina, Kansas.

The following are design elements involved:

1. Loading, unloading and parking areas. Since in most cases parents will be bringing children to the building, it is important to provide easy vehicular access to the main entrance for loading and unloading small children. In some cases, children will be brought to the building by bus. In addition, there will be need for a parking area for staff and use of parents visiting the building from time to time.

2. Entrance vestibule at the main entrance should be provided with hard surface area and ample space for storage of coats, overshoes, etc. This space should be large enough to facilitate easy circulation of aides and teachers assisting children taking off and putting on outer garments. This area should be surfaced with a material for easy maintenance during inclement weather.

3. Administration. Simple office space should be provided for teaching staff and clerical help.

4. Clinic. Minimal facilities will be provided for the nurse who will make periodic visits for routine physical examinations and to administer medical care.

5. Kitchen facilities should be provided normally as a receiving kitchen. Food prepared in a central kitchen at some remote location would be trucked to the building, received in heated, insulated carts; there would be a portable serving line setup at the building. This type of service has the additional advantage of permitting food to be served anywhere in the building, or outside as desired.

6. A quiet area should be provided adjacent to the main learning area, so children can be removed to a quiet area for rest. This space can also be used for individual study and counseling.

7. There should be a large instructional space which would be quite unlike a typical classroom. This space should be without partitions and should be

equipped with furniture and cabinetry that will permit a wide latitude in the formulation of teaching-learning techniques. The portability of equipment will also serve the need of moving said equipment to exterior spaces, when and if desired. Also, the movable cabinetry and equipment will permit the large space to be visually divided into separate areas, when desired, to permit separation of children into separate learning situations. The large space should be surfaced with both hard surface and soft floor covering material, since there are different requirements for floor surfacing, depending upon the varied activities involved. Also, this large area should have different heights to permit a relief in the monotony of the space and to afford children a more friendly atmosphere than in low-ceilinged areas; also to permit a large open area with high ceiling for setting up equipment requiring greater height.

8. Observation space.—Located so that there is observation both directly into the large instructional area and also out into the exterior play and work areas, this space should be elevated slightly above the main floor level so that pupils are not aware of being observed and so that parents and teachers observing will have the proper line of sight. This space should also be used as a parent social gathering area; as a conference space and informal area where teachers can meet with pupils and their parents jointly. The thought is to develop an informal and aesthetically pleasing space that will encourage and invite parents to visit the building and feel a sense of "belonging."

9. Exterior space.—The exterior spaces are of utmost importance in designing facilities for the very young. We have developed space in these two-design concepts that will provide the following:

a. Hard surfaced area.

b. Germinating space.

c. Dirt hill for sliding and digging activities.

d. Sandbox.

e. Windmill and waterwheel to teach children the results of motion through wind and water and to stimulate an element of interest in this facility.

f. Water—which can be in the form of a running stream and/or a pool or series of water pools with pump-circulated water. This will also give an element of motion to the space, both exterior and interior.

g. Animal pens.—A fenced-in area for the enclosing of animals. In large cities it might be that the animal pens could accommodate different types of animals from a traveling zoo that would be periodically brought to the building site so that the children could observe, feed and study animal life.

h. Apparatus area.—Space should be provided for climbing structures and swings on surfacing that is resilient to minimize injuries.

i. Fireplace.—There could be a stone or brick fireplace for outdoor cooking. It might also be possible to have a rolling barbecue cooking unit that could be moved from the interior to the exterior of the building.

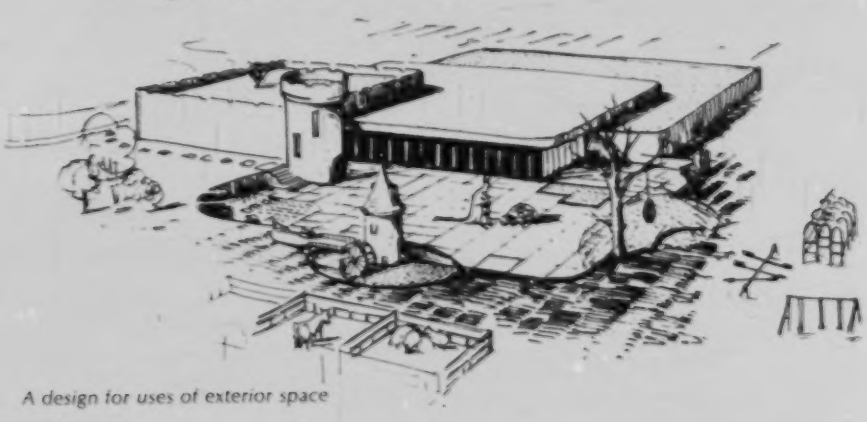
j. Treehouse.—There should be an interesting house built in traditional style, miniature in scale, providing stairways, different floor levels, view windows, etc. This would be a place for children to climb and play "house."

k. Castle.—One design has a tower in the form of a castle where children could climb to the roof and go out onto a view platform at the top through a crenelated coping arrangement; and the top of the roof of the tower would have an extra educational space including such things as a periscope, a world globe and other instruments of science and astronomy.

l. It might also be well to provide simple precast concrete animals to serve as interest features and also for climbing structures.

m. Climbing tree. A large tree might be cut down and moved to the building site, the bark removed, the trunk smoothed and possibly shellacked for safety.

n. Tunnel.—A tunnel should be installed, possibly using a sewer tube running through the base of the dirt hill.



A design for uses of exterior space

John A. Shaver
Shaver and Company
Architects, Salina, Kansas

Homes in a rural Alaskan village

Elementary School, Anaktuvuk Pass, Alaska

Both photographs
courtesy Winifred D. Lande
are from the Alaska Rural School Project

Climate Makes a Difference: In Alaska

by *WINIFRED D. LANDE*

Winifred D. Lande is acting executive director, Alaska Rural School Project.

Everyone knows by now that Alaska is indeed a very large state, but not everyone is aware that it is not all a frigid land of snow and ice. The school architect, though, knows this well. When he designs a school he thinks first of climate—or climates! The Arctic? The interior? Southeastern Panhandle? South Central? Southwestern? Will this school be located high in the mountains or beyond the treeline, in a coastal village, on tundra or muskeg or permafrost?

Climate Indeed a Factor in Building

Wherever schools are built, climate is an important factor in design and location. In many of our areas it must be the prime consideration. For the purpose of this article, let us suppose that our school designer has been asked to submit plans for a preschool center at Anaktuvuk Pass.

Anaktuvuk is a native village (Eskimo) 350 miles northwest of Fairbanks in a rugged pass of the Brooks Mountain Range. Its population is 120, with about thirty children of school age. Its school is operated by the Alaska Department of Education and now consists of a two-classroom elementary school, a light plant, storage room and living quarters for two teachers. It is accessible only by "bush" airline. Winds blow almost continuously in the Pass, and temperatures vary from a balmy 70° above zero in summer to minus 70° in winter. In June there is no real darkness; in December, perhaps only three hours of daylight.

The School—a Community Center

The school is the center of this tiny community. The village council meets here; the movie is shown here on Friday night; often there is a potluck supper in the warmth of the schoolroom. When the preschool center becomes a reality, we will need a third teacher and a comfortable place for her to live.

The need for early childhood education at Anaktuvuk is urgent and well recognized, and our center will come! When it does, the very young children of the village will come with their mothers to listen and learn and speak of many things in the strange, big world away from home. Together they will listen to songs and stories, look at pictures, learn to work and play together and to speak fluently the English so important as a bridge between their own ancient culture and the modern culture, closer to the Pass each year.

What, Then, of the Center?

It must be stoutly built of material that can be shipped in by plane. It must be well insulated against the wind and the cold. The foundation must be firm, but it must accommodate the movement and shifting that comes in the spring breakup season when the top layers of permafrost soften. Ample storage space there must be for supplies, books, fuel, oil for the light plant, heavy outdoor gear. A dependable ventilation system is a must! Probably the teacher's living quarters will be within the school building too. Because of the high cost of transportation, everything must be compact—usable and functional. Windows must be placed to take every advantage of the meager light of winter and doors strategically located for shelter from the wind.

The classroom itself will be designed to allow freedom of movement, but there will be centers for work and play and rest. The floor will be covered with carpet—we like the warmth, color and durability of carpeting. We find too that it is easily cleaned and maintained. Many of our primary classroom floors are carpet-covered over two-thirds of the area, with the remainder done in asphalt tile.

Warm colors will be used on walls and furniture. Perhaps one entire wall may be covered with corkboard, to allow ample pin-up space. Modern lavatory and toilet facilities will be accessible, and because of the possibility of freezing-up, basins for washing and chemical toilets should be available.

Admittedly, this center may not materialize at Anaktuvuk Village for several years. Early childhood education is just beginning in the public schools of Alaska. By statute, the school-age child is between the ages of 6 and 16 years. Kindergartens receive state support, and a child may enter kindergarten at five. The state-operated schools have established a few programs for pre-school-age children. But with increasing recognition of the need for such programs, particularly among ethnically different and/or deprived groups, the new trend is growing rapidly. Head Start programs are established and flourishing in a number of villages under the support of the Office of Economic Opportunity and local community action programs. So, though some aspects of the Alaskan climate may be rigorous—the climate for early childhood education is excellent.

Climate Makes a Difference: In Florida

by *MARY ZELLNER*

Mary Zellner, Project Director, S. Bryan Jennings Elementary School, Orange Park, Florida, discusses some elements of design of particular use and advantage to the preschool section incorporated into a new school building. Both the needs and the opportunities dependent on climate are reflected in the emphasis on the inside-outside flow and exchange of pupil activities.

In climates that are moderate for most or all of the year, many more learning experiences can and should take place in the out-of-doors. Movable exterior classroom walls make possible the extension of learning to the out-of-doors with a minimum of effort on the part of the teacher and pupils. Activities requiring added space, those which are noisier and tend to be disturbing to neighboring classrooms, and those which create an excessive amount of debris and soil, do not need to be curtailed because of the limitations of the learning environment.

Learning activities can spread out from standard classroom areas by merely opening outer, mobile walls onto an adjacent, paved patio. Clay, straw, mud, grass and other materials which might have soiled both desks and carpeting are used with ease on the patio under the supervision of the teacher and teacher aide. After the primary art learning experience is completed, children are engaged in a secondary learning experience as they sweep debris into cardboard boxes kept stored and ready for use in the under-the-counter storage areas of the bathroom. Frequently boys and girls can open the exterior classroom wall and either sit cross-legged, Indian fashion, or they can carry out their little chairs for a story hour or reading lesson in the open air. Because the exterior walls are partly constructed of chalk board, any teaching which would require use of chalk boards can occur outside as well as inside the standard classroom.

Bathroom and drinking needs of all children in the extended classroom out-of-doors require access to bathrooms from both indoors and outdoors. The tiled bathrooms make it easier to keep carpeted floor area free of outdoor soil.

Working with Nature

When plantings of trees and larger shrubs in the background form, as it were, an outer wall, the distant playground distractions can be partially shut

out. Then, too, trees lend cooling shade and the eye of the beholder is rewarded with the natural beauty of the setting.

Pupils gain aesthetic appreciation as they engage in activities to beautify the school campus. Unpaved areas outside the mobile outer classroom wall lend themselves to beautification projects. Boys and girls can watch the growth and progress of their plantings and can study the effect of sunshine, rain and fertilization on growing plants. Space for science projects is available outside the mobile wall either on the paved patio or in the planting area.

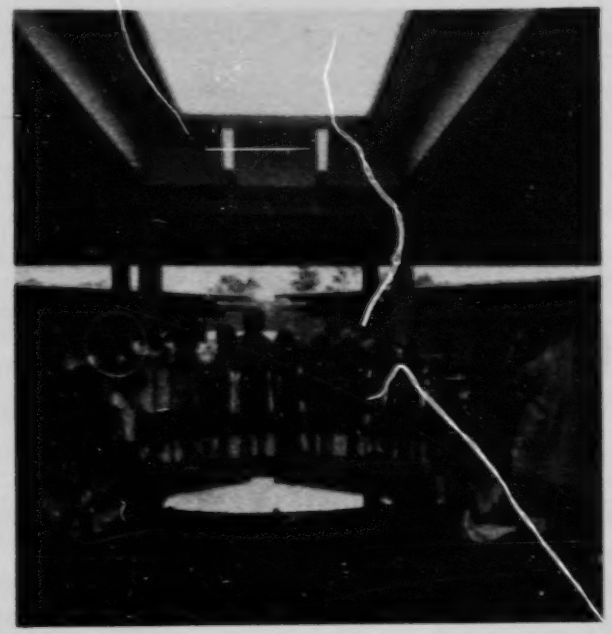
Planning Use of Areas

Use of such exterior areas presupposes much team planning by teachers, whereby, for instance, two teachers may share a common patio in a joint curriculum activity. A sheltered patio area screening children from other activities is used by children in the special education class, who are often easily distracted from planned learning experiences by such a slight matter as the passing of another child or adult.

Here children engage in small group reading experiences, rehearse a dramatization, sketch and paint, or exercise and sing. For the special education child who may have multiple learning disabilities, even the larger classroom is not sufficient and the projected patio area provides a more ideal learning environment.

A protected breezeway

Photos this page and next are courtesy Mary Zellner Project Director S. Bryan Jennings Elementary School Orange Park Florida



The fish pond and walkover bridge are a focal point for pupil-teacher talks about plants, fish and the feeding and care of pets

An arched walkover bridge over the fish pond makes an ideal elevated stage or podium. This is a focal point of the patio area, the site of many pupil-teacher talks about plants, fish, and the feeding and care of pets.

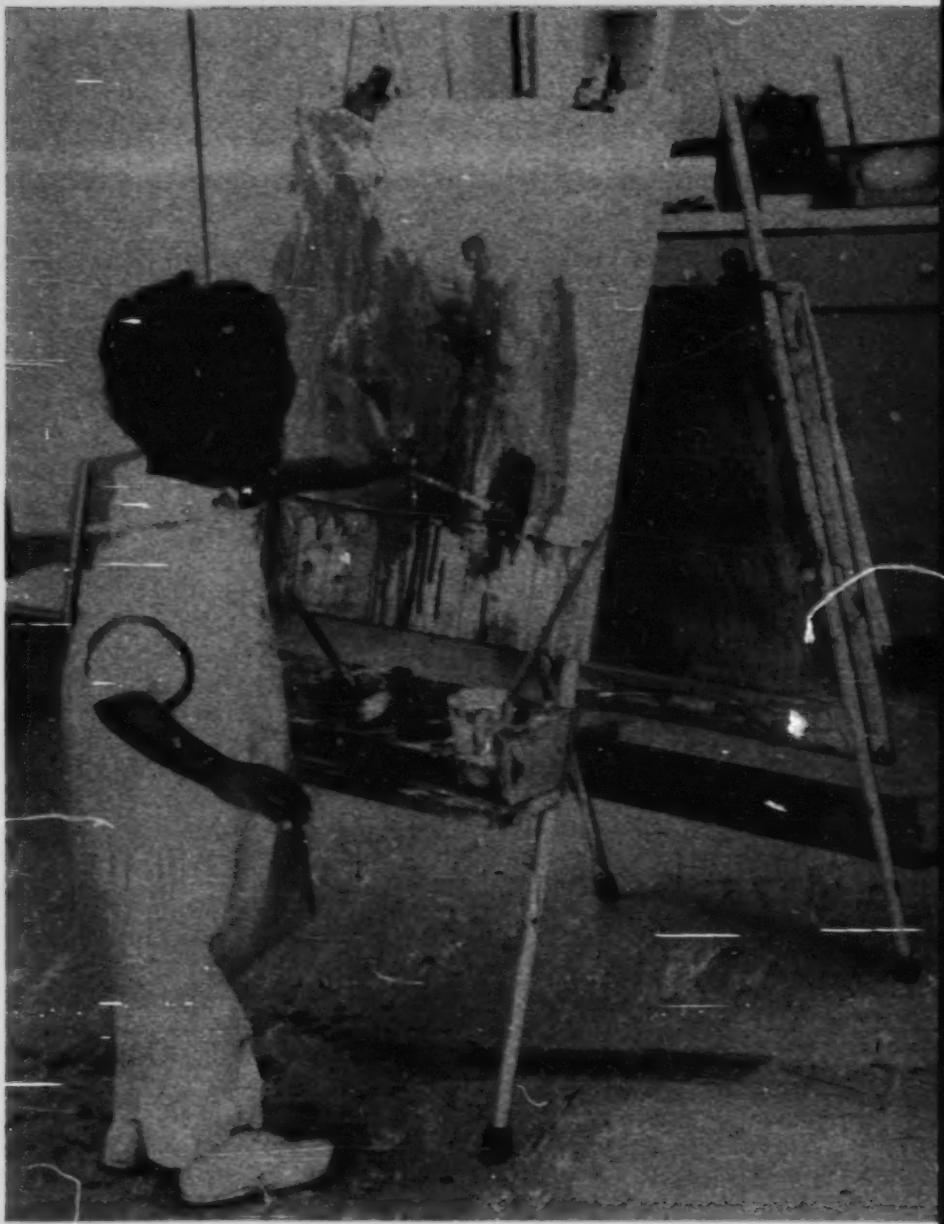
Covered patios between main buildings can be ideal locations for rhythm, calisthenics, circle games and many low-organization, physical education activities. On a chilly or rainy day these protected areas permit children to enjoy the greater freedom of the outdoors while sheltered from weather. Wide, paved, covered walkways not only accommodate passage of children to and from activities, but also afford space for relay races and many large group physical education activities.

Using Environment for Learning

Planning of the outdoor area is necessary for the best learning activities. Use of space must be determined before all trees are cleared away and the area turned into islands of cement. Some trees, as many as possible, should be preserved for shaded areas for informal, creative play. The aesthetic value of interesting tree groupings of shapes, of shade patterns, are not only pleasing but suggest subjects for drawings or stories. Trees are sources of leaves, nuts, bits of bark, and insects to be gathered for science study.

A paved play court is desirable for both low and high organization games and sports, as are walkways to and from the court. In situations where there ought to be two areas of creative play space, that for younger children should be near buildings and that for higher organized games and sports such as baseball, flag football, and track remote from younger children's play area.

The Merrill-Palmer Institute — Donna J. Harris, photographer



The easel is placed on uncarpeted floor area where spills can be easily taken care of.

A Two-Level Floor Design

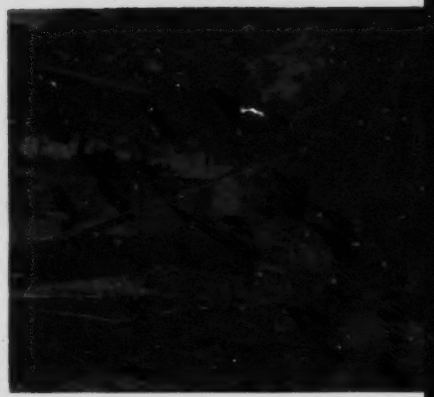
by *MARGARET CONNET*

Margaret Connet, formerly day care representative with the Community Work and Training Program of the Department of Public Assistance, State of Washington, is now with the Division of Statewide Service, University of Alaska, as Head Start Regional Training Officer.

One idea to be tried out is a floor design which would set up interest centers for the usual nursery school play activities, all separated by walking aisles lowered sufficiently so that the teachers using these aisles as they supervised children's play would be on a height level with the children. My thought is that the importance of eye contact would help communication between teacher and child. With railings for safety around these areas, and bridges connecting them, reached by steps at either end, allowing teachers to pass under them and children to use them freely to go from one interest center to another, I can see the encouragement of independence and initiative in children's play having some value, as a result. I should imagine that at the same time the teacher might seem more reachable to a child by eliminating the difference in height.

Kindergarten children in Howard Elementary School San Antonio, Texas
Photo courtesy Rachel Neumann

Central Plaza Day School
St. Petersburg, Florida



Sandbox area with free-standing metal shelter

Paved area for wheel toys

Photos this page courtesy Mildred Graves

III BUILDING ANEW

Our School Grew from a House

by *MILDRED GRAVES*

Mack and Mildred Graves, who opened their first day school by converting a two-bedroom house into a school, are the proprietors of the Central Plaza Day School, St. Petersburg, Florida.

We opened our first school by converting a two-bedroom home, removing interior walls and enclosing the garage. The Central Plaza Day School is the result of our experience in the other school. We attempted to design a more ideal structure, one easily maintained and facilitating better supervision. The plan was drawn to meet the standards of our local licensing board.

We chose to make the lines of the building look like a modern home instead of an institution. The circular drive in the front aids in the arrival and departure of the parents. The building is centrally heated and air conditioned and is all electric. Permanent materials were used such as ceramic tile in all bathrooms, Formica counter and table tops, and stainless steel sinks and drinking fountains. Storage areas are accessible to each classroom; cots are stored out of the way. Locker units were planned for each child. All classrooms open to the playground for safety and traffic convenience. Each classroom has its own bathroom and drinking fountain. We also planned a laundry area so that sheets, towels, smocks and dress-up clothing could be washed at school. The kitchen is very large with ample storage, counter area, and with pass-throughs to the two largest classrooms for ease in serving lunch. There is an eight-foot covered area the entire length of the building.

Our playground is equipped with heavy duty equipment, much of which was handmade. There is a paved area for wheel toys, a playhouse and a large free-standing metal shelter for the sandbox area. The playground is fenced with a four-foot-high steel fence, divided into two areas—one for older children and one for younger. We feel it is wise to invest in good heavy-duty equipment, whether inside table toys, wheel toys, chairs, cots or outside equipment. The initial cost is naturally greater, but the constant replacement cost is eliminated and the tested equipment is safer.

Kemper School
Arlington, Virginia
Photo, courtesy
Audrey B. Gibson

IV REMODELING

An Example of Remodeling: Renovation of Kemper School

by *AUDREY B. GIBSON*

The following is extracted from a memorandum from Audrey B. Gibson, Director, Arlington Child Development Program, Arlington County, Virginia.

The Kemper School and Strawberry Cottage have been leased from the Arlington County Board of Education, Virginia, for a period of from three to five years. Both buildings were sound structures standing empty for five years, but had been almost completely demolished inside.

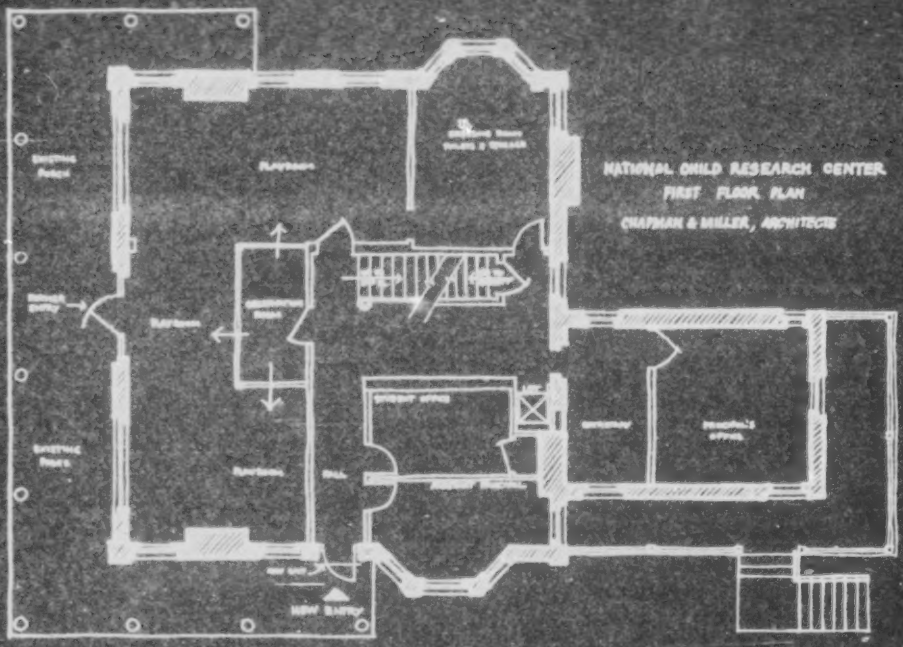
State and local license agents worked closely with the site committee and contractor to make sure all occupancy laws and regulations were followed and completed. Bids were taken, the lowest of three getting the contract. The actual renovation was completed in two months, after four months of legal proceedings.

Funds from the Office of Economic Opportunity were matched by the Arlington Child Development Board which raised its part of the money through donations.

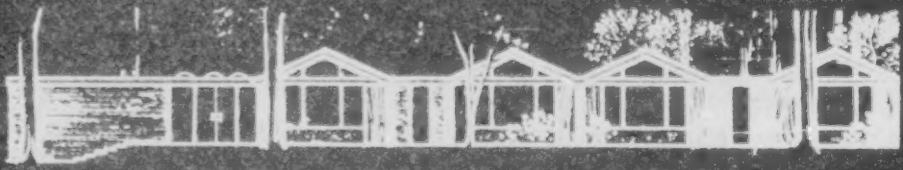
This all-day, year-round Head Start Project, developed by the North Arlington Child Care Centers, Inc., and the Arlington Community Action Committe, Inc., for 135 three-, four- and five year-old children has involved wide community effort of social workers, parents, teen-age volunteers, civic groups and associations, many churches, and commercial firms that donated services.

Wooden climbing equipment, toy traffic signs, building blocks, curtains for 24 windows, puppets, doll furniture and many other items were made by 175 volunteers, including entire families, who worked twice weekly for a summer month.

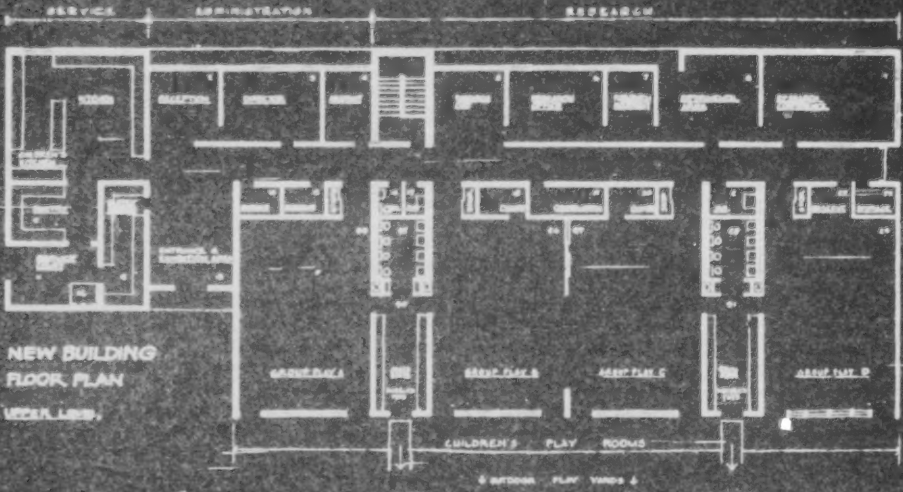
This organized group called the Creative Service Shops operated in one of the largest participating churches. It was found at the finish of the project that the value of the toys and equipment produced by the volunteers far exceeded the budget that had been allowed for the purpose.



NATIONAL CHILD RESEARCH CENTER
FIRST FLOOR PLAN
CHAPMAN & MILLER, ARCHITECTS



SOUTH ELEVATION · PROPOSED NEW BUILDING · NOT CONSTRUCTED



NEW BUILDING
FLOOR PLAN

Remodeling the National Child Research Center, Cleveland Park, Washington, D.C.

In discussing problems related to renovating an old residence into an educational facility, Joseph Miller of Chapman and Miller, architects, stated that there was no real disadvantage in achieving an indoor-outdoor movement but that, though it was necessary to develop a proper circulation plan, architects were able to make use of existing doors and passageways to give each classroom an exit to a stairway or, on the ground floor, to the outside. There was the added advantage for the child finding himself in a new environment that the circulation pattern was reminiscent of the home situation and likely to make the child feel more comfortable than in the traditional institutionalized pattern.

Another asset in the renovation was that the grounds were spacious and of such irregularity that interesting arrangements could be made and landscaping features for imaginative play could be easily achieved. There was the added advantage of being able to isolate play areas from one another.

A well-built existing building, the architect stated, is likely to have certain features to be made use of, such as high ceilings, a quantity of fine woodwork and over-all good circulation pattern. Not enough use has been made of susbtantially sound, existing buildings for education centers. More renovation could be done, particularly in fringe areas or in "inner city" situations where fine old houses could be rescued from demolition and converted to use rather than make way for possibly inferior buildings.

A further suggestion from Mr. Miller, who had had experience recently in designing a new elementary school built in Fairfax County, Virginia, was that it is possible to accommodate a building to a site more satisfactorily by not gutting the landscape of existing trees but in transplanting older, matured trees from one place on the site to a spot nearer the completed building. Transplanting older trees is cheaper than bringing in nursery saplings and gives the undoubted advantage to the operation of making a new school look "lived in." In achieving an aesthetic appearance, the architects have recognized the importance to teacher and children, whether in old schools or new, that the building be harmonious with the rest of the neighborhood.

Photos, this page and page 42
courtesy Richard Zerby
Laboratory School
Millersville, State College Pennsylvania

V FACILITIES

Indoor Facilities

by *RUTH E. JEFFERSON*

Ruth E. Jefferson is director, Pinellas County License Board for Children's Centers and Family Day Care Homes, St. Petersburg, Florida, and member, ACEI Publications Committee.

Careful planning of indoor facilities for kindergartens and nursery schools is essential whether they be located in buildings built for young children or in those built originally for other purposes. While the health and safety of the children must be protected indoors, it is just as important to provide indoor facilities which will serve as the best possible background for the children's total program.

Of utmost importance in every nursery school and kindergarten is the classroom area, which may consist of a self-contained room or a series of rooms for a single group of children. Entrance hall, offices, isolation room, kitchen, conference rooms and utility rooms may also be provided. Lighting, acoustic control, floor surface, wall cover, space, and flexible use of rooms are among the important factors to consider. These will be some of the areas of this discussion.

The children's classroom should be a friendly, pleasant, large room, a room the child readily recognizes as his because everything in it is scaled to his interests and size—tables, chairs, toys, and games. Pictures and display materials are hung at his eye level. The sink and drinking fountain will be easy for him to reach. Some of the windows will be low enough so that he may see the outdoor scene beyond. It will be a room which fairly invites him to come in.

Space

In comparison with the play center in the average home or the Sunday school classroom in many churches, this room will seem spacious. Authorities differ on indoor floor space recommendations, but the range from 35 to 60 square feet per child will provide a fair-sized room for a group of from 15 to 25 children. If the group is small the space per child should be increased in order to provide adequate space for the equipment, its use,

Two-story playroom
at Millersville Laboratory School

and for the varied activities of the children. If the same room is used for lunch and afternoon naps as well as for the morning program, it is important that space be generous so that transition activities can take place smoothly. Lunch, bathroom and naptime routines can lead to fine learning opportunities for the children in the hands of qualified staff. These opportunities may be forfeited, however, if space is limited because in efforts to provide smooth transition, teachers may feel forced to keep children under strict control.

Bathrooms

It is best to have children's bathrooms opening off the main playroom, with one bathroom opening as well into the outdoor play yard. All doors should open easily and should not be equipped with self-closure devices.

Partitions should be low, making adult supervision easier. Low toilets are good, especially for the youngest children. Basins should be hung low enough so the child can conveniently manage the faucets himself. If adult-height fixtures are the only ones available, platforms should be installed so that the shortest child can step up to use toilet and basin conveniently. The usual recommendation is not fewer than one toilet and one basin for every eight children. It is essential that wall and floor surfaces be of a type readily scrubbed; neither bare cement floor nor unpainted walls should be permitted. A floor drain is recommended. The bathroom requires good light and adequate ventilation. A mirror above the basin will help the child in washing so that he will not be dependent on someone to see if his face or elbows are clean. Towels and soap should be available near the basin, but the paper-towel dispenser should not be located over a toilet. Hooks used for cloth towels should be far enough apart so that hanging towels do not touch each other. The installation of a bathtub should be carefully considered for the all-day program. Though it probably would not be used daily, the bathtub would be a convenience for the times when a child needs an all-over bath.

Room Sink; Drinking Fountain

A sink (double preferred) set in a counter at child height is recommended for the main activity room. The sink counter and wall behind should be surfaced with Formica or some other easily cleaned substance. It should be remembered in selecting surfacing, stainless steel, while durable, will show every water mark. Hand-washing sinks may be located in the classroom; however, at least one is needed in the bathroom to facilitate cleaning up a child who has had a toilet accident and to encourage the washing of hands after use of the toilet. The drinking fountain with protected bubbler should be of a style that cannot throw water beyond its own basin.

Lighting

Specialists should be consulted to provide a satisfactory lighting system. For children's rooms good light without glare is required. General diffused light is best. Some means of artificial lighting should be installed in every classroom, even those making optimum use of daylight. Rooms in mid-city or in air-conditioned buildings having little natural daylight may be dependent upon artificial light. Insufficient or glaring light can cause fatigue, eye strain and, in some cases, eye damage. Important considerations are window placement and room color. Windows reaching as near as possible to the ceiling and providing northern exposure in the northern hemisphere and southern exposure in the southern hemisphere are recommended. It is important that some windows extend low enough for children to see out. Room

color does much to determine lighting effectiveness. A white or off-white ceiling with walls and other large areas of light-color shades are important reflectance factors. A light-colored linoleum, asphalt, or vinyl tile on the floor is also desirable and is easier to clean than a dark floor.

Wall Cover

Light shades on walls, tables and floors provide a pleasing background for children's equipment and toys, their paintings and craft work, much of which will be in vivid color. Kindergarten and nursery school walls need not have blackboards but there should be provision for easy mounting of pictures and art work either on bulletin boards or walls with a type of surfacing to permit mounting. Tack board walls of cork composition permit teacher and children to utilize any area for display purposes. Bulletin boards should be at child height so he may see displays and mount his own work conveniently.

Acoustic Control

A lively hum of busy activity characterizes most nursery school and kindergarten programs as children pursue various interests at the same time such as, block building, home play, carpentry, using the record player, playing table games, and painting. This natural, busy hum can seem like a deafening roar in a room where little attention has been given to noise control. It is, therefore, highly important to achieve acoustic control in such a room where, since excessive noise causes irritation, strain and distraction, much stricter control of children is the usual solution. Wall and ceiling construction and surfaces can be designed for sound absorption. Room shape is an important factor, a nearly square room being preferable to a long narrow one. Rugs and draperies can effectively be used in helping to absorb sound. Devices used to hold acoustical ceiling blocks in place are sometimes used by the teacher for hanging children's mobiles, other artwork, pulley ropes, and tether balls. How much better if the ceiling could be equipped with beams, girders, hooks or other arrangements for holding such objects!

Floor Surface

Because children spend so much time sitting and working on the floor, floor surfacing is important. Consideration should be given to factors of resilience, comfort, durability, maintenance and acoustical control. Linoleum, asphalt or vinyl tile are to be recommended. Wood floors are found in some schools, but maintenance requirements are a problem and a wood floor that has developed splinters is a safety hazard. Bare concrete and terrazzo floors are durable but their hardness, coldness, and maintenance requirements would be strong deterrents to selection. If the building is located in a

Floor play on a surface that can be readily mopped or scrubbed
San Diego City Schools

geographical area where inundation is a frequent or likely occurrence, a drain should be built into the floor.

In some rooms, particularly in newly built schools, durable indoor-outdoor carpeting with frequent, regular vacuuming and shampooing is being tried out. Carpeting is comfortable and effective in softening noise; it is easy on toys and often pleasing in appearance. For such activities as block play, looking at books, listening to music, and group discussions, it is an asset, but easel painting, clay modeling, noon lunching, water play and similar activities where spills are frequent, probably should be carried on where the floor surface is readily mopped or scrubbed. Large area carpets or rugs, therefore, are sometimes more satisfactory than wall-to-wall carpeting.

Flexible Room

Today's flexible use of the classroom began years ago when desks and seats were unscrewed from the floor. The kindergarten or nursery school teacher

Teatime at
Laboratory School
Millersville State College
Pennsylvania

Photo, courtesy Richard Zerby

finds interiors designed for flexible use are a definite teaching tool and asset, such as, for example, rooms with a shallow el or a room which incorporates an alcove that can be utilized effectively in the arrangement and rearrangement of centers of interest. A small room opening off the main room can be adapted to many purposes: at one time it might house the library; at another, the home living corner, or it might be used for special projects for only a few children at a time. Observation of children is simplified by means of glass panels at adult height in the walls of the small room. The glass sections also provide for more effective lighting.

An enclosed mall between two classrooms has been utilized effectively. Glass panels in the walls make supervision of the mall easy and provide a desirable feeling of light and space in each room.

If floor area is small but ceilings high, balconies can be built in with railing, ladder, a fireman's pole and perhaps a removable slide. Here are many opportunities for inventive dramatic play as well as opportunity to use big muscles. Perhaps such a balcony could be built in over a coatroom or storage closet if these must be provided within the room.

Flexible Equipment and Location

Any classroom can be used in a flexible way through the arrangement of the centers of interest. Movable furniture is important.

Chairs of proper height for the children using them should be conducive to comfortable, upright sitting posture. Modern, sturdy, stackable chairs or the solid wooden "posture" chairs used for some years now in nursery schools and kindergartens are good. The chair should be light enough for the child to move and, since it will frequently be used at a table, should not have arms. A rocking chair or easy chair, folding chairs, stools or benches may be happily used as odd chairs or seats in the home living corner, library or some other center of special interest, but this type should not be substituted for the regular school chair provided each child in attendance. An adult-size rocker or easy chair may serve a useful purpose as a special place for a teacher to hold a child who needs it or for a child to climb into to be by himself.

Good school chairs are imporatnt. To purchase those which are less than adequate is poor economy. Extra chairs should be stored so they do not take up space needed for child activity.

Tables, easy for the teacher to move, should be sturdy with smooth, hard surfaces (like Formica, which is easy to clean) and of approximate height for the intended use. Tables accommodating from four to six children are generally advisable for kindergarten and nursery schools. For groups of younger children it is wise to have some tables for just two children. Table shape may vary according to need and space available. Rectangular tables have been

found to be generally satisfactory. Round tables have desirable social and aesthetic advantages, but a round table which must double for fingerpainting and other craft activities will not take as many large sheets of paper as a rectangular one of similar size. A low, low round table has been successfully used in a library corner where children seated on the floor could browse through books comfortably. Small tables with odd shapes designed to be used singly or in combination are versatile.

Storage units in the classroom are sometimes built into the wall. Most teachers feel it would be difficult to have too much storage space. Cabinets, cupboards, shelves and bins should be located for the greatest convenience of teachers and children. A full-length door on a large cupboard unit can be used to hold a bulletin board, blackboard, pegboard or mirror. Counter-height tops of cupboards and shelves should be topped with Formica or similar durable surface.

It is recommended that classroom equipment and toy storage units available to children be individual units that teachers can move. Open shelves that can be moved about the room serve as useful area dividers and also make fresh room arrangements more possible. Movable shelves mean that more wall space can be provided than if all shelves are fastened to the wall.

Shelves for storage of items used daily such as puzzles, games, balls, floor trucks and art supplies, should not have doors, which take up valuable floor space, as they swing open and shut and are a possible hazard. Where shelves need to be closed, sliding doors that can be removed are preferred. If the schoolroom must be put to another use after school hours, casters make it possible to turn the shelves to the wall. Bulletin board or pegboard backing helps convert the unit for dual use.

The location of materials is important to convenience. For example, shelves containing paste, paper, scissors, crayons and collage materials belong near tables to be used for these activities; musical instruments hung on a pegboard or placed on shelves belong to the part of the room where children may experiment with them. Trucks, cars, small toy animals and play people frequently used in conjunction with unit blocks are logically placed nearby.

Smoothly rolling casters on shelves especially designed to hold a full school set of hardwood unit blocks will make this unit even more practical. Since much floor space is frequently required for complicated, sprawling block structures, it is helpful to be able to use space which may have to double as area for rhythms, group discussion or some other activity at another time.

Placed flat side by side, books invitingly displayed on steeply slanted shelves will make them readily accessible, and if books are regularly rotated according to demand and interest, the book-corner will be popular. One school makes good use of a book display unit discarded by a store, which consists of a pole stand around which book racks revolve.

"Reading" alcove at Howard Elementary School San Antonio, Texas
Photo, courtesy Rachel Neumann

If *sleep cots* are provided, storage room must be arranged. Lightweight cots with washable covers can be stacked or folded but should have air space between when stored for sanitary reasons. The lightweight aluminum cots used in some day nurseries may be hung vertically from two rods extending from the wall high above children's heads but easily reached by adults. Cleats on cot legs prevent the cot tops from coming too close together. Sometimes cots are stacked on dollies and rolled right out of the room when not in use. An excellent storage arrangement for cots with legs that fold under and which must be stored within the room is a built-in rack that holds the cots upright two to three inches apart. If a built-in cupboard is used, it should have louvered doors to allow air circulation. Space over the cupboard can be utilized as a balcony for the children or as teacher's storage space.

Wrap storage should be provided for according to climate conditions. The most convenient facilities are individual cubbies with compartments for boots below and hats and mittens above and with two hooks each for coats, sweaters, pants. In the north, where putting on wraps is a serious undertaking for young children, space must be planned for this activity either in the classroom or in a wrap room convenient to outdoors as well as to the classroom. Even in southern climates, where a sweater or raincoat might be the only wrap, anticipated, adequate facilities will have to be planned. Individual cubbies give space also for the child's personal belongings—his paint apron, extra change of clothes and art work. Two parallel shelves about 12 inches

apart with upright partitions between, dividing them into ten-inch compartments, give inexpensive individual space for each child. A hook under each compartment holds sweater or coat. Hangers on clothes rods are difficult for young children to manage; wraps often fall off hangers. Should there be child-height hooks on the wall, it will be necessary to build protection of some sort, such as a shelf on the wall above, placed so that a child could not even accidentally run into the hook or be pushed against it. Dividers should be spaced so that wraps for one child will not hang against those of another.

Some centers have wrap storage units on wheels that are rolled into the corridor between uses.

Audio equipment, such as a record player and tape recorder need special facilities; this may be a movable cart or cabinet specially designed to hold the equipment. Electric outlets should be located at several places in the room at adult height or should be protected in such a way as to be available only to adults. Electric outlets are needed not only to make it possible to use audiovisual equipment in a variety of places but also to provide current upon occasion for an aquarium, a hot plate, popcorn popper, toaster, egg hatcher, electric fans, vacuum cleaner, Christmas tree lights, and other appliances. Some of these appliances require heavy duty electric wiring. If outlets are sufficiently numerous and well spaced the teacher will not be tempted to resort to a string of extension cords. All wiring should be done under the supervision of specialists with approval of the local building and electrical authorities.

The School Entrance

An entrance hall or a room can be made homelike or appealing to children as they come into the school building for what is for most of them their first experience away from home. The teacher may consider the attractiveness of certain wall, floor and window treatments: pictures, a shelf on which some interesting object is displayed such as a plant in bloom, an eye-catching toy or a bird's nest or some other find from outdoors. A closed-in feeling must be avoided. The entrance hall would be the logical place for a parents' bulletin board.

In warm climates, where children may enter the classroom directly from outside, a covered outside entry area, such as a roofed-over patio or walkway may serve as protection during inclement weather. If the center is located in a building serving other interests, it is wise to provide a separate entrance for young children near their classroom.

Offices

The school office may double as the director's office or the two may be adjacent. Here children's records will be kept, clerical requirements carried

out, school administration records maintained. Here parents may be interviewed, and some small conferences held. If there should not be enough space for each teacher to have a desk, cabinets for holding teacher's records can be built into the classroom wall with a desk surface that folds down from the wall. Parent conferences can be held in the classroom after the children have left, if the program is a part-time one, or they can be held in the school office or conference room. More offices will be needed if a social worker, psychologist, researcher, dietitian or others are a part of the program.

Isolation Room

The purpose of the isolation room, which must be located for easy supervision by a staff member, is to isolate temporarily a child who becomes ill or develops symptoms of a contagious disease while at the center. The room should contain a bed or cot made up with clean bedding. Provision for continuing care of the isolated child is not usually necessary, since most centers require parents to take sick children home promptly. In centers large enough to have a nurse on duty, the isolation room may be partitioned off from a larger room used as a health room and nurse's office.

Kitchen

It is essential, even where there is no legal requirement for it, that kitchen plans and procedures be approved by the local health authority. The type of food to be prepared is an important consideration in planning the kitchen. Food for young children is generally simple and does not include deep-fat frying or other heavy cooking. Quantities are usually small compared with amounts for a similar number of adults.

Where practicable, a "pass through" from the kitchen to the room where food is eaten facilitates service. If children are to help with serving, the "pass through" should be low enough for them to reach. In some centers space is given to teacarts on which food is transported. If food is served family style at the children's tables, as is recommended, it will not be necessary to provide cafeteria counters or additional kitchen counter space to serve individual children's plates. An adequate freezer and storage pantry are essential if quantity purchasing or surplus commodities are anticipated.

In centers not offering meals, kitchen facilities need not be extensive, but there should be provision for preparing and storing children's mid-morning or afternoon juice, milk and snacks. Unless disposable utensils are used, adequate dishwashing equipment (in accordance with health requirements) will be needed. It is useful to have facilities for serving light refreshments at parent meetings.

Conference Room

A comfortable, friendly atmosphere should characterize the room that is designed primarily to serve the parent as a parent lounge where one or two can visit over a cup of coffee, a room where comfort and privacy encourage informal chats between parents or with a staff member. Here a parent class could be held or a parent discussion group could meet while the children's groups are in session. Chairs and tables at adult height make this room more comfortable than the children's rooms for night group meetings as well. Folding work tables and other stored equipment make it possible to convert the room for sewing or other work activities. If more than one conference room can be provided, one darkened, well-ventilated room adjoining the children's classroom might be equipped with a one-way vision mirror. Here parents could observe children during the indoor session. With draperies drawn across the mirror, films or slides could be shown. Upon special occasions, groups of children might use this room for film or slide viewing. In some cases, the one-way vision mirror might be installed in a teacher's office or some other room adjacent to the classroom. If the center serves as an observation laboratory for groups of students, a one-way vision facility with provision for hearing may be incorporated into a room designed for this purpose alone.

Utility Room

Heating and perhaps air conditioning units may require special rooms, for the local fire code may include special regulations governing furnaces and other items used by schools which differ from regulations covering these in buildings primarily serving other purposes.

A mop closet containing mop, sink, and house-cleaning equipment will be needed for maintenance purposes.

An automatic washer and dryer are useful in centers where children stay all day. In addition to sheets and towels, it is sometimes good to be able to wash children's clothes.

A work room for maintenance and construction of equipment is desirable. This is especially helpful in a cooperative school, Head Start center, or other school where parents or volunteers may do much of the work.

One of the keys to the success of many early childhood programs is the careful planning of indoor facilities. Good planning best results from cooperative efforts of professional early childhood consultants, teachers, architects, technical specialists, and health authorities with the program sponsors. Even in buildings not originally designed to serve young children and which cannot be remodeled, good planning for the flexible use of available space can compensate for many handicaps.

Equipping and Arranging a Room for Kindergarten

by *KAREN STEVENS*

Karen Stevens is Elementary Consultant, Pinellas County Board of Public Instruction, Clearwater, Florida.

The kindergarten classroom is a workshop, a playroom, a room for living and learning, a room to enjoy. Whether it be a renovated room in a fifty-year-old structure or a bright, modern one in a brand new building, the kindergarten room should speak its welcome to each child who enters. Rooms can be frightening or friendly to a five-year-old, and one of the teacher's first jobs is to try to get a child's-eye view of the place where children will be spending several hours each day. We need to be concerned with how rooms welcome children. Age of the room is not necessarily important; but light and color, equipment and its arrangement, are.

Planning Starts with Children

What determines our decisions about these things? Planning starts with the children, and we need to ask ourselves what we know about five-year-olds, their needs, abilities, interests.

Then Teacher, Time, Materials

We know that they need, first of all, an understanding *teacher*, who will use her knowledge, resourcefulness, creativeness to provide good learning experiences for each child in a setting that is challenging and interesting. They need plenty of *time*, a relaxed, unhurried atmosphere, where one activity flows easily into another, in which the day's plans are not regulated by bells and clocks. We know that children of this age work best individually and in small groups, and therefore only a small proportion of our time is devoted to large group activities. The total group should ideally not exceed twenty children. They need *equipment and materials* suited to their expanding interests and abilities, materials which will challenge their curiosity and inventiveness, which will aid them to form basic concepts about their world and themselves, and which will encourage cooperative work and play. We

know that they need space in which to move around freely.

Elbow Room

When we think of arranging and equipping a kindergarten room, we think in terms of flexibility. A really functional room lends itself to many varieties of arrangement. An activity-centered program requires space to set up centers of interest, space for storage, unencumbered space for games, rhythms and other large group activities.

Tempers fray easily when space is lacking. The noise level rises and voices get higher as children are cautioned constantly not to get in each other's way. There is little room for individual activities, no quiet corner. The teacher has a difficult time making possible enough free choices to challenge children's interest and curiosity. She may give up entirely and institute a regimented program which will fit into her tiny room and keep the children quiet. Problems which are constant in small, crowded rooms do not even arise where there is adequate space. Next to a good teacher, space is probably the most important asset we have. At least fifty square feet per child of unencumbered floor space is essential.

Flexible Equipment

Movable storage cabinets are preferable to many built-ins, which may prevent flexible use of wall space. Movable units can be used as room dividers when and where they are needed. Tables which can be arranged in various ways also help to make this flexibility possible. Consider the kind of tables needed. Will they be round, square, rectangular, trapezoidal or a combination of these to fit space and requirements?

A floor partly carpeted makes possible a comfortable arrangement for circle time without the need for arranging chairs. The uncarpeted portion should be near the sink, allowing for placing of easels in an area where spills can easily be taken care of.

Some thought might be given to a "second story", built over necessary cot, or other, storage space and reached by a stairway or a ladder. Such a room could become a playhouse, a fire station, a library. This is a good way to stretch space vertically.

Storage and Display

Every classroom needs storage space, individual cubbies for children's belongings, cupboards for games, blocks, toys, art equipment, plus some storage available only to the teacher. Shelves should vary to accommodate many sizes of paper.

A great deal of display space for children's work is needed. Bulletin boards which reach nearly to the floor make it possible to display children's work

at their level. Some chalk board is also desirable, and it too should be at a level that children can reach. Some kind of water supply is indispensible. A sink with several feet of Formica counter top is ideal, as, in addition to other uses, it provides space for "instant" finger painting. A storage bin for clay may be part of this sink area.

Criteria for Choosing Material*

There is need to be discriminating in choice of materials and equipment, with careful thought given to the wide range of interests and abilities represented. Good equipment lends itself to many uses. These questions can be used as guides in selection of materials and equipment:

Will it encourage cooperative play?

Can it be used in many creative ways?

Can the same equipment be used in different ways at varying levels of maturity?

Will it stimulate curiosity, experimentation?

Will children have fun using it?

Durability is important. Equipment used every day, often by as many as fifty children in two sessions, must be built to last. Size is important. Contrary to popular belief, "little things for little people" is not always a sound maxim when it comes to choosing equipment for a kindergarten. Housekeeping toys—dishes, dolls, cleaning equipment—should not be tiny. Full-size tools are best for the workbench.

Weight of both hollow and unit blocks should be in proportion to size. They should feel like blocks when lifted. Children's concepts as well as their muscles are developing as they use these things.

Safety and health factors must be taken into account. Edges should be round, not sharp; paint, nonpoisonous. Surfaces should be easily cleaned.

Price must also be considered, but quality must not be sacrificed, and the cheapest is not always the most economical over a period of time.

Finally, knowledge about children's interests and abilities, planning for a wide range of experiences and experiments, will determine our choices. There must be a reason, based on good sound understanding of child development, for what is being bought. The person charged with the equipping of a kindergarten has need to be ever-vigilant against the lure of "cute" gimmicks and gadgets, which must be used in a stereotyped, rigid way.

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* Suggested Reference: Association for Childhood Education Int'l, *Equipment and Supplies*, 1968 edition. Criteria for Testing, p. 4; Suggested Lists for Kindergarten of 20 Children, p. 10.

Using the Head About Using Space

How can space best be used for children's needs and activities? The teacher's first task is to make her room functional and attractive as well as stimulating. She can do this in many ways. Accents of bright color, plenty of children's work displayed (rather than commercial cut-outs and teacher-made "pretty" decorations), centers of interest which say, "try me", will make the children feel that the room is truly their own. The teacher needs to plan her time carefully in order to use it to best advantage. Efficient arrangement will save a great deal of unnecessary housekeeping. Many centers of interest must be provided, with thought being given to setting up related activities near each other, to the traffic pattern between centers, to the relationship in the location of noisy and quiet activities. There must be places where children can be together and places where they can be alone. There should be room for groups of various sizes to work in without crowding.

The block corner, which requires plenty of space, should be out of traffic lanes so that constructions may be left up for others to see. Transportation toys as well as human and animal figures often have their place here. Carpeting in the block area adds to the pleasure as it minimizes sound.

A housekeeping corner equipped with sink, stove, table and chairs, doll beds, dolls, dress-up clothes, also requires space for children to move around in freely so that it can become a center for many kinds of dramatic play. Judicious use of foldaway screens and storage cabinets can be used to define the limits of this area.

A quiet library corner is a "must." Books may be kept on shelves near a table (a round one with a vase of flowers is friendly) with several chairs. A book display rack encourages looking and choosing. A rocking chair in this area provides a comfortable relaxing place in which to "read" that favorite story one more time. What better place than here in which to display a print of a famous picture with child appeal! (Renoir's "Girl with a Watering Can" or one by Mary Cassatt, perhaps)

Dominoes, peg boards, other table games and puzzles as well as art supplies—paper, crayons, scissors, chalk, paste, the scrap and collage box—may be kept on low open shelves which are readily accessible to the children and near the tables where they will use these materials. The easels should be placed where the light is good, and there should be plenty of paint in a variety of colors, many sizes of brushes and large (18" x 24") paper.

A place to display and experiment with science materials might be on a counter or table near the sink. Room to spread out those leaves or stones or shells, and magnifiers both large and small, make real discoveries possible. Other scientific equipment such as magnets, collections for sorting and counting, and measuring devices (scales, spoons, rulers, yardstick, containers)

can be stored near at hand for use when needed. The terrarium is here, and the aquarium possibly close by. Seeds and plants have their place from time to time. Somewhere in the room will also be a place for a pet cage where that visiting rabbit or hamster may have his temporary home.

Providing for Expanding Activities

Audiovisual equipment is now a part of many kindergartens. A listening center where this may be both used and stored is ideal. Filmstrips and projector, records and record player, tape recorder and earphones have their place here. Here also may be the music center, where percussion and melody instruments (drums, bells, xylophone, autoharp) may be available for experimenting with sounds. A piano is an added boon.

Provision needs to be made for water play, with things to sink and float, containers for pouring, straws and soap for blowing bubbles. A water table on wheels may be moved outside in warm weather and can also be used as a sandbox when desired.

A workbench is attractive to boys and girls alike and provides many learning and role-playing activities as well as opportunities for use of large and small muscles. Many tools are desirable. Saw, hammer and nails are fine for a beginning, but five-year-olds are eager and able to learn to use drills and planes as well. Often a school custodian is happy to become a part-time teacher in this area. Occasionally an administrator needs to be reassured that the use of a workbench and tools is no more dangerous when properly supervised than are other kindergarten activities. The workbench, too, can often be moved outdoors.

Cooking is another activity which provides learnings in science and numbers, in addition to the fun of doing it, and the added fun of being able to eat the product. A stove, or at least a hot plate, is highly desirable. Sometimes a mobile cooking unit is shared by several rooms.

Wheel toys, such as wagons, tricycles, wheelbarrow, have their place outdoors, as do large pieces of stationary equipment including jungle gyms, climbers, ladders and boxes. Here too, equipment which can be used and put together in many ways will encourage greater creativity than that which may have only one use.

The total environment should be both relaxed and stimulating. Although it should be orderly, neatness for its own sake can hamper full and creative use of materials. The ideal environment invites activity; it should be functional. If we agree with the writer who said that school should be the most beautiful place in the child's environment, we should keep this in mind as we arrange and equip our kindergarten rooms.

"... opportunities for exploring, discovering, learning."

Top photo courtesy U.S. Office of Education; bottom, courtesy Mrs. George Waring, San Antonio, Texas

Extending the Indoors Outside

by *KATHERINE READ BAKER*

Katherine Read Baker was formerly head of the Department of Family Life, School of Home Economics, Oregon State University, Corvallis. She is now retired and living in England.

As adults, most of us must spend a great part of the day indoors. We are fortunate if, as children, we had the opportunity to spend long hours outside. To feel the wind in one's hair, the warmth of the sun, the rain against one's face make vivid memories from childhood to be recalled with pleasure later. For a child, time spent watching clouds in the sky or the patterns of light and shadow through trees or discovering some of the many objects to be found outdoors are experiences for wonder. They feed the eager curiosity of childhood, which is the basis for learning.

In planning a nursery school program we need to provide for many experiences outside. Outdoor play helps lessen the burden of pressures on children, which come with life under crowded conditions. Healthy children are likely to be those who spend a great deal of time outdoors where they can play actively and imaginatively.

When children are brought together in groups, it is essential to have adequate space for outdoor play. We need also to make sure that the outside environment offers plenty of opportunities for exploring, discovering, learning. It must not be a barren environment. Almost every activity which can be carried on indoors can be carried on as well or better outdoors when weather permits. We need to extend the indoors outside.

What are considerations for planning an outside environment for nursery school children? What activities can be carried on outside?

Planning the Outside Environment

Climate The climate will, of course, be a factor in planning an outside environment for nursery school. Every playground must be planned in relation to climate. If there is much hot weather, there will need to be more shade provided through building a covered terrace or pergola or planting quick growing shade trees if no trees are there. Since hot, dry weather makes

it difficult to maintain grass, there will be more use of sand, tan bark, asphalt or dirt. There may be a wading pool. In a cold, windy climate planning will call for planting of windbreaks and an outdoor play shed.

Proper clothing is necessary if children are to gain from being outdoors every day. Teachers too must plan to be active and to dress appropriately in inclement weather. At home many children spend the day inside when it is cold or rainy, getting in the way of busy adults, with nowhere to discharge their energy. School can bring them a much-needed release when it offers time and opportunity for active play outside. In Norway there are nursery schools where children spend almost all their day outdoors except for occasional shelter in a ski hut.

Space is one of the greatest needs of children. Standards for minimum space per child have been set in many states, but it is obviously desirable to provide more than the minimum if possible. The wise use of space is almost as important as the amount, and thoughtful arrangement of equipment can extend its usefulness.

There should be large open areas and secluded areas for individual play or for small groups of children who may want to carry on play free from interruption. The outdoor play area is best located on the south side of the school building where there will be sun and light throughout the day; there should be shade and protection from the prevailing winds.

Although the outside space can sometimes be extended by taking small groups of children on excursions to a nearby park or open piece of land, these areas cannot take the place of a playground of their own.

Enclosing the Play Area Is Essential

Safety is an important consideration in planning any area, but it is especially important in thinking about outside areas. Unnecessary hazards must be eliminated and the greatest hazard comes from traffic in the street. For safety a child-proof fence with adequate fastenings on the gates is essential.

An enclosed play area relieves the teacher of a heavy burden of responsibility. There is always some impulsive child who may run out of bounds or a disturbed, defiant child who will not stay within limits. If the teacher must be alert to watch out for these children, she has less time for other teaching activities.

Children gain in other ways when the area is enclosed. They can play more freely when there is a fence, following their impulses without fear of consequences. A fence gives them a sense of freedom when its purpose is to keep them safe. Of course, it is essential that children learn to be aware of the dangers of busy streets by learning to control their impulses and gradually taking responsibility for themselves, but they need to be free of responsibility at times. They need to be free to run and play with abandon,

without constant supervision. There are benefits for children and teacher alike when the playground is safely enclosed.

Landscaping Is Important

Proper landscaping of the outside area makes it more aesthetically pleasing and furthers the purposes of the school. Flowers and shrubs in a variety of colors, sizes and growing cycles are a source of pleasure and they add a dimension for observation. Low shrubs give children opportunities for exploring and hiding in dramatic play, while they make it possible for the teacher to supervise. Trees provide shade in summer and in the fall and winter give children a chance to play in leaves or enjoy the tracery of branches against the sky or climb in a variety of ways not offered by man-made equipment.

Sometimes a play area will contain slopes or large rocks or even a stream. These things present challenges to children, enlarging their world and giving them chances to add to their skills in mastering it. Some such features can even be added to any playground. When the ground is entirely level, a small hill can be made by bringing in dirt, perhaps from a building site being excavated. A tree trunk or cement culvert can serve for clambering over or through instead of rocks. Variety in terrain and planting enriches the children's experiences even in limited outdoor space.

Variety in Surfacing

Every playground should have more than one type of surfacing. If possible, there should be grass so that all children can experience the delight of play on this soft surface. There should also be some hard surfacing for the wagons and wheel toys which have such an important place in the dramatic play of young children. The hard surfaced area serves children best when it takes the form of a walk or "road" extending through the play area and returning to its starting point, thus avoiding a "dead end" where traffic may become congested. The walk should be wide enough for tricycles, wagons and doll buggies to pass without difficulties. There should be curves rather than right angles at corners to prevent spills. Another needed area with a hard surface for block building or other types of play requires level or dry ground.

Some area should be left as plain dirt where all children can realize a satisfaction common to every child—digging a big hole! Digging develops body skills and may lead to discoveries of important, interesting things such as worms or roots. Children can make their own garden here. After a rain the dirt becomes mud which offers a chance for "messy" play. Play in mud helps children bear the pressures to keep clean at other times and places. No amount of clay or plasticene can replace the joy of play in plain, natural mud outside.

Dramatic play "Added space makes it possible for children to arrange new centers . . ."

A large sand area outside is important. It may have a rim of cement or wood to help keep it contained. Here children can play together and carry on both parallel play and cooperative projects like building highway systems.

The basic requirements for extending the indoors outside, then, are ample space safely enclosed, well landscaped, with a variety of surfaces and with shelter adapted to the demands of the climate.

Relation Between Indoor and Outdoor Space

Whenever possible, indoor space should open directly to the outside with doors that are easy to open so that children can move freely in and out. French doors can be thrown open when it is warm. Although every child should spend some time outside, some children will want to spend more time there than others. All will gain from following their individual patterns in play if there are rich provisions for play both inside and outside.

When indoor play areas are adjacent to outdoor areas, it is much easier to move equipment back and forth between the two. A ramp to facilitate the moving of supplies and equipment is preferable to steps if there is much difference in level. A cot dolly or low platform on wheels will reduce the time and effort involved in moving and may serve in dramatic play for the children. When it is not possible to have toilet and coatroom areas located adjacent to the outside play areas, it may be possible to have one toilet opening off the playground. Cold weather and winter clothing, hard to manage quickly, make speedy access to a toilet important.

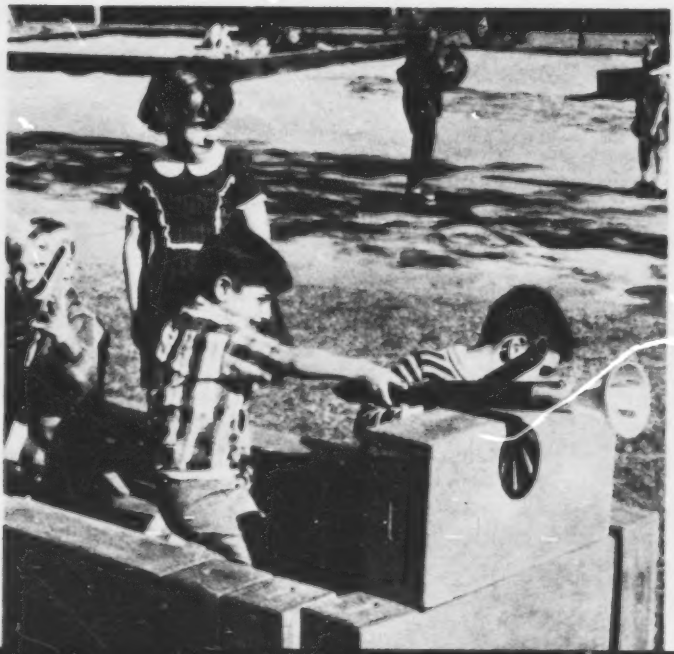
Proper Storage Outside

Planning proper storage space for equipment and supplies used outside reduces the time and effort for setting up the physical environment each day. If an easel can be stored outside, for example, it need not be carried outside. The planning of storage space is discussed more fully in the following article.

Activities Outside

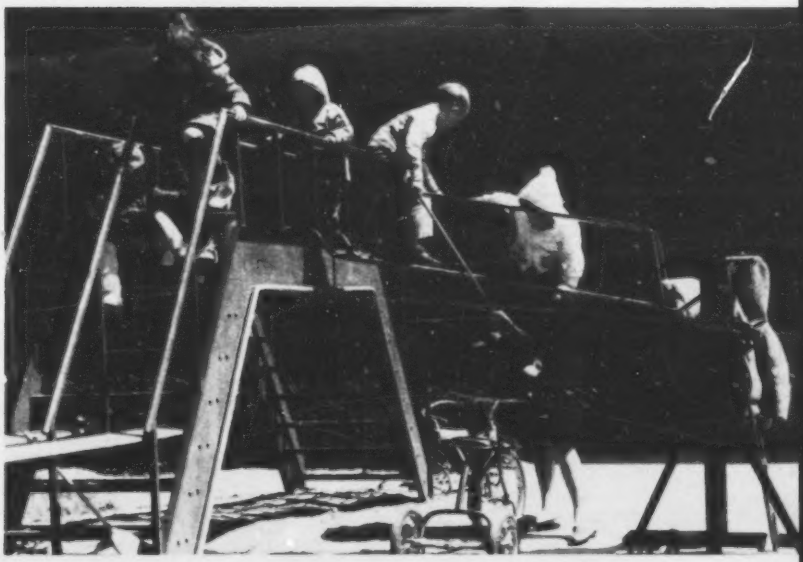
Dramatic play of all kinds is well suited to the outdoor areas. Housekeeping equipment such as bed, table, chairs, stove and dishes can be set up in a quiet spot away from the flow of traffic. A chest on casters will make it easy to bring out dress-up clothes. Added space makes it possible for children to arrange new centers as they change their roles from cowboy to fireman to gas station attendant. A new setting brings new dimensions to the dramatic play of any group.

Water play is better suited to the outdoors than the indoors if the weather is warm. Washing clothes as part of homemaking play is easier to arrange outside where it does not matter if water spills or clothes drip. Walks can be scrubbed with big scrub brushes or mopped with plenty of water. Soap bubbles float on the breeze outside. A large tub on the grass or a wading pool gives a child the chance to explore the properties of water. Puddles are fun. How deep is it? Where does the water go? Taking a walk in the



The new center is a ship in action

Photos, these pages, San Diego City Schools



The Merrill-Palmer Institute
Donna J. Harris photographer

rain is different from walking on a sunny day. It leads to comments about splashes, gutters, drains, the feel of wetness.

Art experiences in different media lend themselves to outside play areas. There is fresh inspiration in painting outside, whether at an easel or with finger paints on a table or on paper laid on a walk. Many children feel freer in finger painting outdoors than they do inside. An easel outside should be placed where there is no glare on white paper. Pasting, working with clay or collage materials can be done on tables outside. The children themselves can clean up afterwards, for there is less need to be cautious of dripping on furniture or other play materials near by.

Music belongs outside as much as inside. There are likely to be more rhythmic activities outside that can be accompanied by music, such as swinging or pounding or jumping on a board or trampoline. Children can make loud noises on instruments like drums, triangles, bells, or they can beat on an upturned metal tub or barrel. There is room for marching. And dancing can offer varied and singular satisfaction with the season, such as on warm days dancing barefoot on the grass or in autumn dancing and romping with the leaves as they fall.

Singing with activities encourages their rhythmic quality. The teacher may bring outside an instrument such as an autoharp or perhaps a flute or violin to play while the children listen or respond to the music with movement. Dancing in natural response to music is made more enjoyable for young children in the freedom of outdoors.

Books and *stories* belong wherever children are. A table with books set up in a quiet, shaded place is a place where children will stop to look and talk with one another about their favorite stories and pictures or "read" to each other in their own fashion. For a group story period outdoors the teacher can bring out rugs or a large piece of canvas to sit on while she reads with the children or tells a story. Sights and sounds of the outdoors may be woven into a story. There is a chance to sit and wonder about things afterwards.

Special Activities

Many activities begun inside can be extended to the out of doors. If some children become interested in measurement, they can use a surveyor's chain outside to measure distances. Experiments with pulleys can be set up outside for children interested in physical forces.

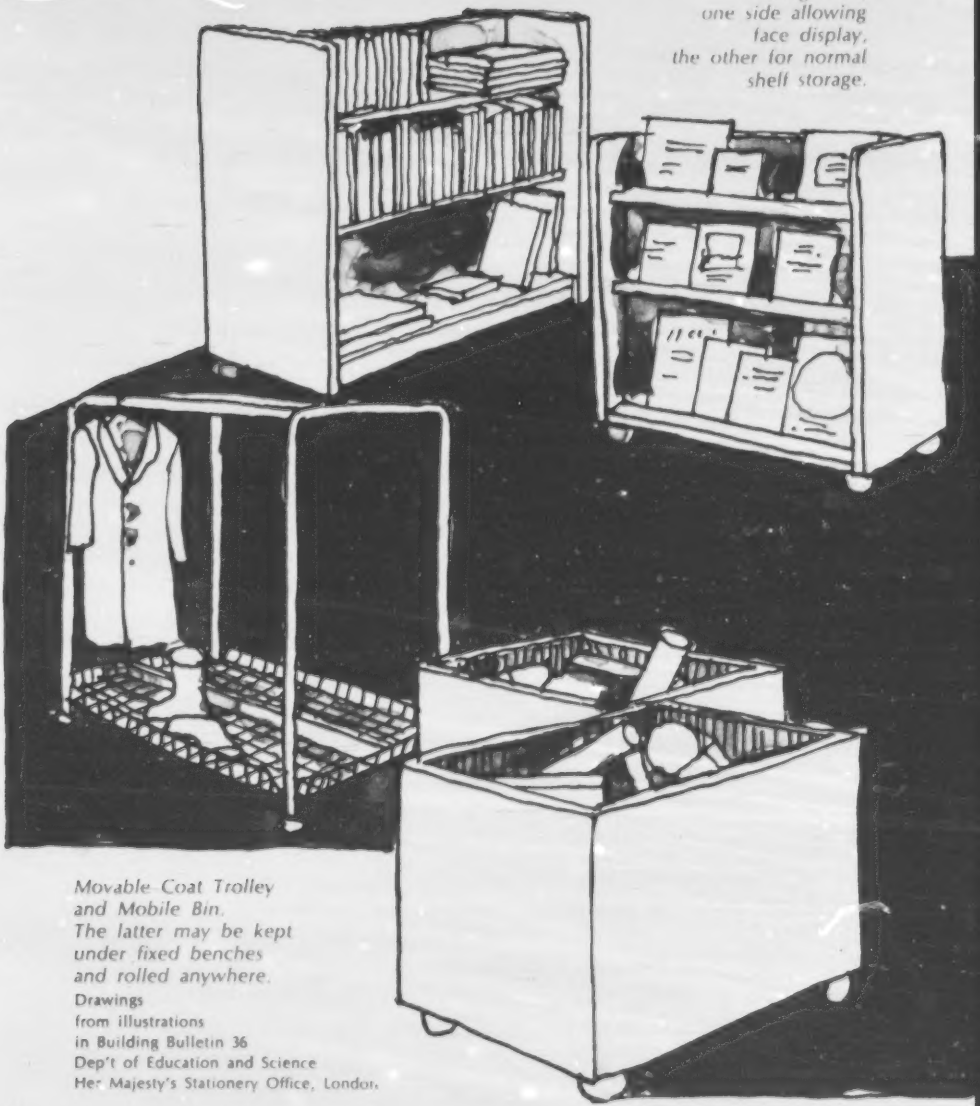
The outdoors encourages sustained purposes such as construction on large projects with all the learning which comes from solving practical problems in building. Many kinds of projects set going outside can be left to be worked on day after day. There is less often a need to disturb or dismantle a construction than inside where orderliness must at times prevail. Experiences with animals which are larger than those housed inside add to children's experience. Lambs or kids, chickens and ducks can be cared for outdoors with proper housing. Changes in temperature, water freezing, ice melting, sun and shade and its effects, all these are observations of interest under the guidance of an alert teacher.

Eating in different ways and in different places makes it easier for children as a group to grow in flexibility without losing the advantages of an established routine. *Eating* and *resting* are outdoor activities under the right conditions. Children love picnics and, with careful planning, a picnic meal can be fun and nutritionally well balanced. Cooking and resting outside in the nursery school may be an introduction to camping for children who have not yet had such experiences.

The Outdoors—Richness for Living and Learning

The world of the outdoors is an exciting and stimulating world for young children. With a dependable adult near, a child can explore it safely and learn to understand and master some of what it offers. He can imagine and create and learn.

Sometimes school playgrounds are barren places in comparison to city streets, but they need not be. A nursery school playground should offer much more than the street to eager, resourceful young children. It should be a place of their own, full of rich experiences for living and growing.



Book Storage and Display Trolley. A two-faced rolling shelf, one side allowing face display, the other for normal shelf storage.

Movable Coat Trolley and Mobile Bin. The latter may be kept under fixed benches and rolled anywhere.

Drawings
from illustrations
in Building Bulletin 36
Dep't of Education and Science
Her Majesty's Stationery Office, London

A Place in Space

by *SOPHIE ROSNER*

Sophie Rosner is Early Childhood Program Director of the Queens College Children and Parents Center, Jamaica, New York.

To the young child the world is all that he can feel, hear, see, touch, taste and smell—all that he can experience with his body. This world becomes multidimensional and many-faceted, the more extensive the variety of experiences he lives. In school he can begin to translate this world of concrete experiences into the signs and symbols of the larger universe.

An environment arranged and appropriate for the young child's learning must provide the following essentials:

☐ adults who are concerned with guiding and stimulating all realms of learning: the social, emotional, physical and intellectual

☐ a large variety of equipment and materials with which to engage in a sensorimotor capacity

☐ and sufficient, safe physical space wherein to make use of the equipment and materials, and *the places to keep them readily available.*

"A place for everything!"

"A place for everything" is a consideration of prime importance if classroom organization is seen as a determining influence on the daily program and curriculum. With how much independence can young children function concerning routine matters? Can arrangements of space and equipment free teachers for more productive use of time with children? Are there built-in learning possibilities inherent in the selection and placement of equipment? Are clarity of focus and the avoidance of clutter influenced by the placement of equipment and materials? What are the implications for learning in such an environment?

Storage space in many early childhood facilities is likely to be arranged in a haphazard manner; cabinets or shelves are placed against whatever wall space is available in attempts to make the best of a given situation. Storage space planned to fulfill educational needs would emerge from a general

building plan that in turn would reflect the theoretical premises of the program. A philosophy that supports a program of activity through which young children can explore, discover, learn and know would indicate need for the following for storage that provides a place:

☐ to keep the indoor and outdoor materials in daily use—blocks, cars, trucks, housekeeping materials, crayons, paints, paper

☐ to keep the things that may or may not be used on a daily basis, but which need to be readily available—musical instruments, additional books, picture file, math and science materials

☐ to store equipment and materials for seasonal use—sleds, snow shovels, water spray, wading pool

☐ to keep consumable supplies safe, fresh, and inviting—assortments of papers, collage materials, chalks and crayons, collections of waste materials

☐ to keep auxiliary equipment easily accessible—corn popper, portable oven, cooking equipment, egg incubator, fish tanks, animal cages

☐ to keep audiovisual equipment and materials—cameras, film, projectors, film strips, records, tapes.

Outdoor Storage

Storage of outdoor equipment has been a persistent problem in most outdoor play areas and particularly so in urban centers where space is at a premium. In large cities the roof of the school building often serves as the play yard. How can outdoor storage space provide protection from weather, security against theft and vandalism and safety in use and supervision? Is it possible to provide and incorporate adequate storage space into other functions and facilities?

One such design was developed for the Queens College Children and Parents Center in Jamaica, New York.* The central core of this construction is a large storage area from which radiate slides, swings, stairs, climbing logs and a large bark or sand pit. The roof area of the storage core is fenced in and adds another level to the play area. Covered by a roof, it could serve as an elevated playhouse. Inside the shed, shelves are placed to accommodate sand toys, ladders, sawhorses, walking boards. Bold lines painted on the floor designate parking areas for the wagons, bicycles, fire engines, wheelbarrows and doll carriages. Pictures to designate each parking spot help children to label and identify.

* The Queens College Children and Parents Center, New York, a multipurpose preschool and parent education center in South Jamaica, a community in the Borough of Queens, New York, also serves the community as a preschool and parent education resources center.

A prefabricated garage or one built to order can be desirable storage space for outdoor equipment if the equipment is properly organized. The entire front of the shed should open like an overhead garage door. A slightly raised floor might be needed in rainy climates or where flooding of the terrain is likely. A ramp would facilitate moving wheeled equipment in and out of the shed. Equipment could be organized and arranged as just described above. Outdoor blocks can be loaded onto low hand trucks easily wheeled in and out of the shed. Perhaps a different hand truck for each size block would aid in clean-up.

Dispersed Storage

In a spacious play area, low bins and shelves of varying heights could be constructed around the perimeter of the yard. Roll-top fronts would safely facilitate opening and closing. The variegated heights and widths of the storage units could serve as a stage, seats, and walking and climbing equipment. Bins could hold sand toys, ropes, chains, balls; shelves could store the portable equipment and movable vehicles could be parked in miniature garages.

Safe ground surfacing under large equipment is of primary importance. There is attrition in sand and bark scattered by wind and in pebbles that get carried away by children. It is necessary to consider available good surfacing materials and new products available, even though they are expensive. Maintenance of outdoor equipment can be cut to a minimum by using such durable surfacing materials as laminated woods, plastics, enameled metals, tiled bricks or cobblestones. They need only an occasional hosing-down and are available in clear, bright colors.

With so much national attention focused upon schooling for young children, the possibility of housing built to the specifications dictated by a constructive early childhood philosophy becomes a reality. Planning must include consideration of a variety of departures in classroom organization, as well as for the many details of space and place with which teachers are concerned as they implement the daily program. Heretofore, the nursery classroom has contained all indoor activities within the confines of its four walls: block building, dramatic play, art, woodworking, science, experiences with books, cooking. Perhaps arranging for some activities to take place in specially designed areas for specialized work adjacent to the main classroom could develop new dimensions of teaching and learning in early childhood education.

A woodwork shop, under safe supervision and equipped with easily accessible tools and materials, would not necessarily discourage the block builder from making what he needs for his block construction but might alleviate the annoyance of loud, uncomfortably close noises.

A spacious kitchen with equipment installed at child height could help to provide social and science experiences with greater physical safety and successful results.

A nature room wherein could be found a collection of small animals, plants, and equipment for accommodating new animals and plants, might serve as a "science" laboratory and a "lending library" of plants and animals for home as well as school.

A library and audiovisual materials center from which to choose materials to take back to the classroom, or view on the spot, could bring to children vicarious experiences.

These specially designated areas might be placed so as to be immediately adjacent to a number of classrooms, each classroom to be equipped with basic materials and the specialized areas to function as a pool with a greater variety to be shared.

Classroom Storage

Classroom storage space must be a vital concern of planners. How about a large central storage room from which would radiate classrooms? Or, should each classroom unit include an additional room for storage purposes? Should it be a large alcove which could be closed off by a movable wall? Are shelves the only way to keep equipment and materials organized? Could low bins on wheels be used? Bins could contain collections of things. Waste materials, organized and stored in this way can encourage children to assort and classify their own contribution.* Can use be made of drawers, sliding shelves, baskets, circular shelves that rotate around a central pole? Other storage necessities are racks for drying paintings, files for keeping paintings, cabinets for drying and keeping clay work in progress, shelves that hold wide paper. Art rooms in newer elementary school buildings have some of these facilities which are needed in the nursery classroom.

Storage facilities affect the efficiency of all the personnel in the nursery school; storage of supplies affects their ready availability to teachers; storage of food, dishes and carts affects the punctuality of meals as well as the sanitary condition of the kitchen. Maintenance workers need storage space for tools and supplies if they are to accomplish their tasks with economy of time and movement.

Plentiful and accessible storage space can contribute vastly to creating an unhurried and unharried climate in which young children can learn, each at his own pace. In such an arrangement, a maximum of the teacher's time is free to be spent in direct relation to the children.

* Judith Cauman, "It Pays To Organize," *Bits and Pieces: Imaginative Uses for Children's Learning* (Washington, D. C., Assn. for Childhood Education International, 1967), p. 57.

VI WHAT'S A-BUILDING ABROAD?

Kindergartens In Australia

(Permission has been given by Miss H. H. Pearse, Director of Kindergartens, to use the following excerpts from "A Guide to Planning Buildings and Playgrounds," by the Kindergarten Assn. of Western Australia, Inc.)

The intent here is to present ideas, suggestions or developments that are not of purely local use or interest but that might be generally adapted or incorporated into planning buildings and arranging playground facilities.

The building and playground should be planned together, keeping in mind the placing of the building on the site in relation to aspect, appearance, and economy of outdoor space. The result should have the effect of the playroom being a sheltered continuation of the playground.

Site

Land: This should have level areas but some slopes or mounds are desirable. Between one third and one half of an acre is required for a centre with thirty children in one session.

Play Area: The minimum space for play *exclusive* of building, thoroughfares, sheds, passages and spaces less than ten feet wide, should be *200 square feet* per child. A larger area is desirable.

As the preschool child lacks fine motor coordination, has slow reaction time, lacks experience and, therefore, judgment, it is necessary to avoid all major hazards, indoors and outside.

From the standpoint of both teacher and children, provision needs to be made for a minimum carrying of material, so that all storage facilities should be adjacent to the area where the equipment is used.

Playrooms

Doors opening onto play area should be glassed to within at least 2'6" of floor to facilitate observation. They should allow for an opening from 6' to 8', and in order to avoid hazards sliding doors on a track, or double doors which fold back flush with the wall should be used. Sliding doors should slide on outside (i.e. verandah side) of main doorways so as to avoid interference with inside wall space.

Design for the arrangement of a building on a site

From "A Guide to Planning Buildings and Playgrounds," by the Kindergarten Association of Western Australia, Inc.

Planning the Playground

1. *Position* In front of building, so that the main doors lead out to the terrace and thence to play area. It is essential that the play area does *not* surround the building as this makes adequate supervision extremely difficult if not impossible. L-shaped play areas can be attractive and help zoning activities.

2. *Area* A minimum of 200 square feet per child is desirable—but 250 square feet per child is better—to develop an attractive "adventure" playground.

3. *Sandpatch* At least 100 square feet of sand area preferably with an interesting round, oval or free-form shape. *Shade* is necessary over the sandpatch in summer and may be achieved by the use of a canvas awning on a steel framework, a sheeting or tiling roof on a wooden frame, or even by the use of a bough shed type of roof. Natural shade from trees is quite satisfactory but because of leaves and droppings from the trees the sand is more difficult to keep clean.

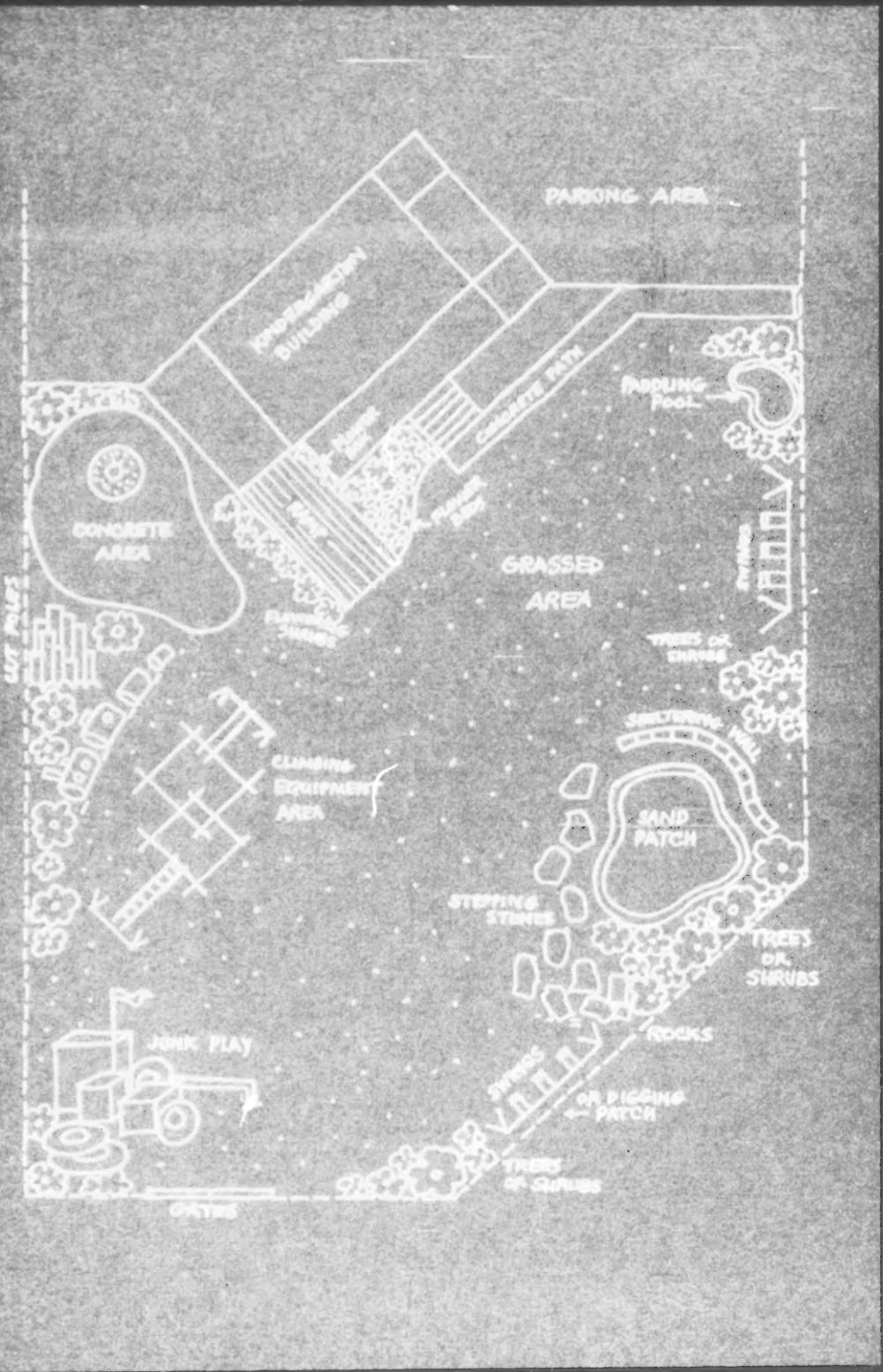
4. *Taps* There should be at least two taps so that the lawns can be watered. One of these taps should be near the sandpatch so that sand and water play can be combined in suitable weather.

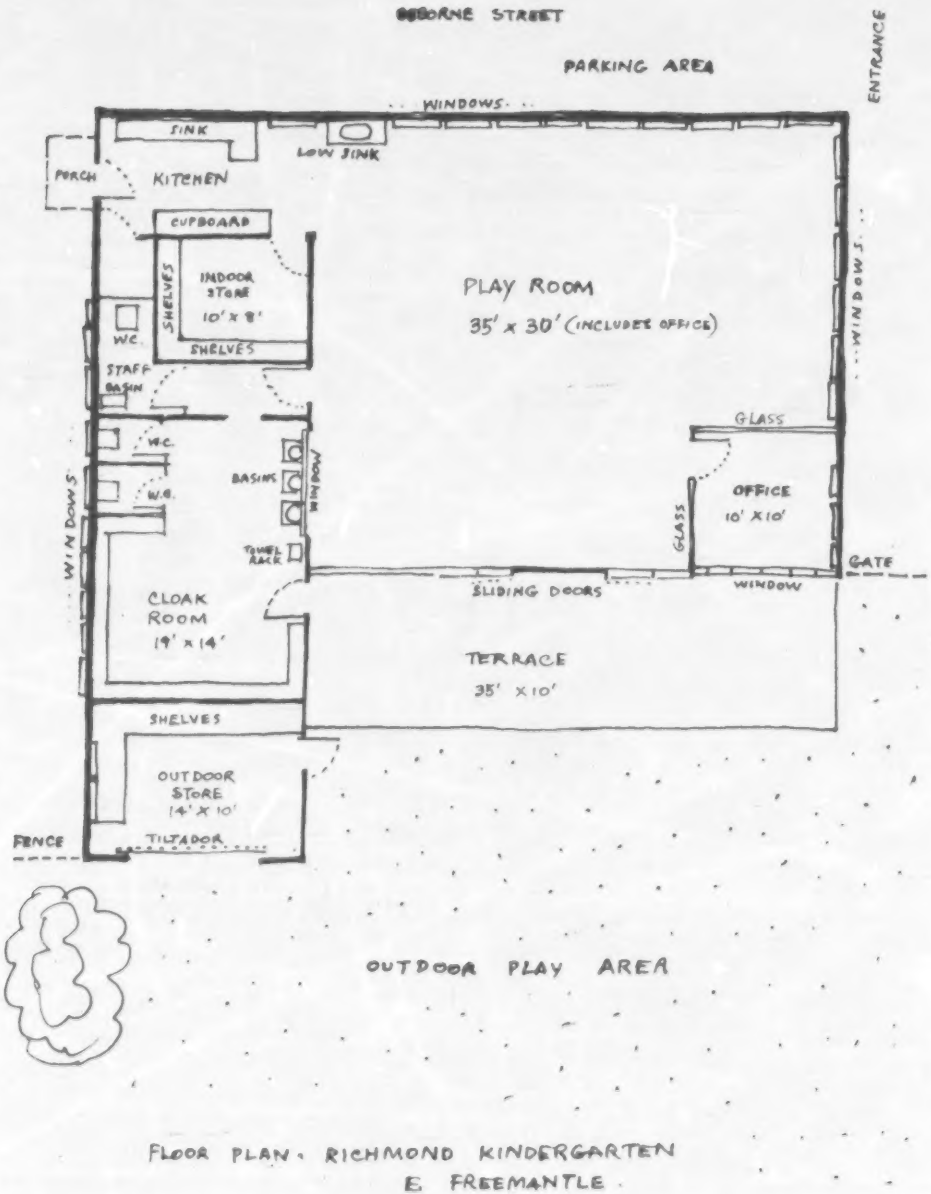
5. *Swing Area* This should be well clear of other equipment and free running area for safety reasons. A low protective fence may be required.

6. *Climbing Area* The climbing apparatus and the area used for planks and trestles and large junk materials should be close to the outdoor store.

7. *Planks and Trestles* The area for these should be adjacent to the outdoor store so that they do not have to be carried too far. This area should be grassed.

8. *Free Running Space* An area away from all equipment to provide space for ball games and other running games.


PARKING AREA
PADDLING POOL
CONCRETE AREA
GRASSED AREA
SWINGS
TREES OR SHRUBS
SHELTERING WALL
CLIMBING EQUIPMENT AREA
SAND PATCH
STEPPING STONES
TREES OR SHRUBS
ROCKS
JUNK PLAY
SWINGS
OR DIGGING PATCH
TREES OR SHRUBS
GATES



FLOOR PLAN - RICHMOND KINDERGARTEN
E. FREEMANTLE

A floor plan for Richmond Kindergarten
East Fremantle, Australia
From "A Guide to Planning
Buildings and Playgrounds"

9. *Digging Patch* An area back from the street and screened by low shrubs if possible to allow for 'construction work' by the children. This should be close enough to a tap or hose so that water can be used if required.

10. *Trees and Shrubs* Native trees should be left where possible. Care should be taken that trees planted will not in time shade the building too much, particularly in the case of evergreens. A garden to add colour to the ground and provide a nature interest for the children is also desirable. All trees, shrubs, and gardens should be planned so that they do not break up the area allotted for various activities.

Outdoor Store

Essential for the storage of movable outdoor materials (planks, trestles, wheeled toys, etc.). This shed should be 12' x 10' with a height of 7' to 8' so that an adult can comfortably stand erect. Building may be:

(a) Attached to the main building. Where playroom opens out onto a terrace, one end of the terrace can be enclosed by building a storeroom with double doors opening out onto the playground. Built in this way, it provides a sheltered area on the terrace for play and also reduces building costs. The floor of this store must be at ground level.

(b) Detached from main building but adjacent to area where equipment is used. Care should be taken that the design and material will fit in with the main building and add to the general appearance of the kindergarten rather than detract from it. Pre-fabricated structures, as used for garages, are sometimes suitable.

Doors Door opening should be *at least 6' wide* and doors may be:

(a) Double doors fastening back against the walls.

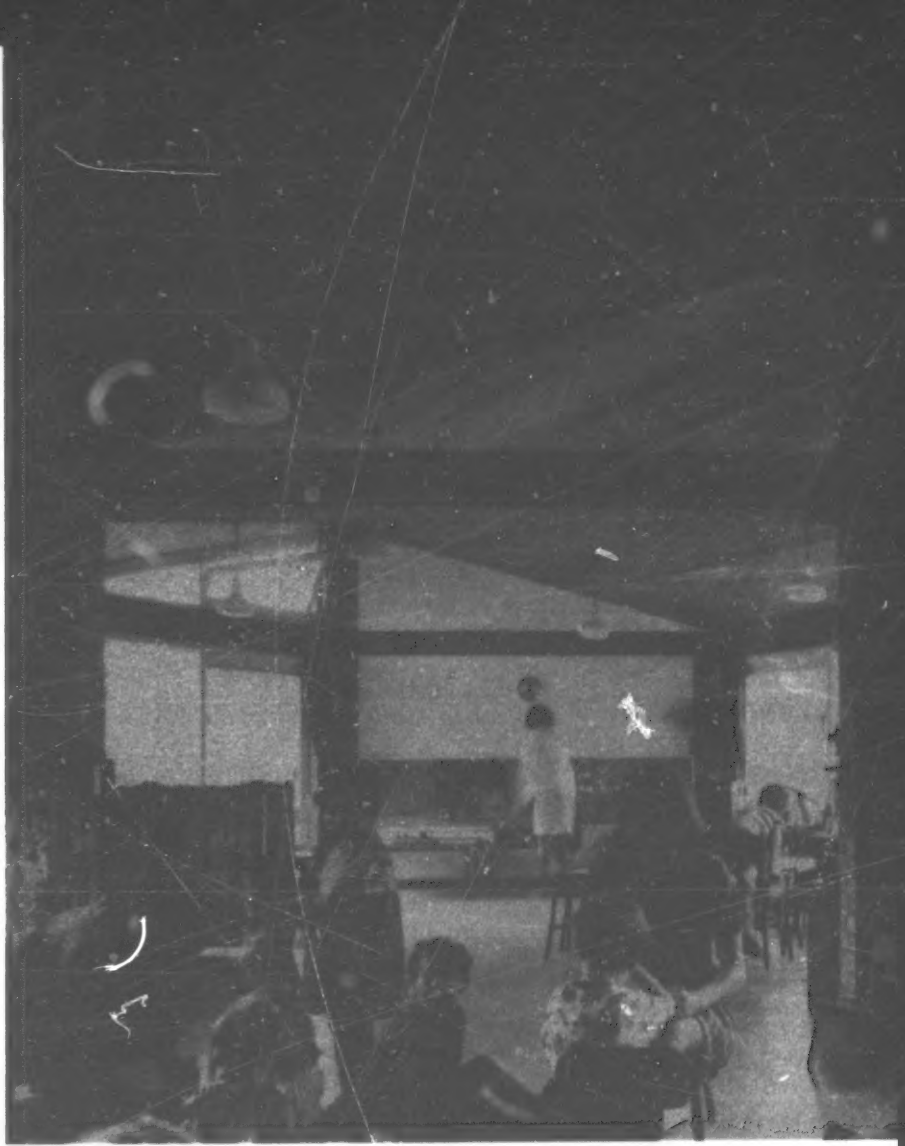
(b) Tilt-a-door or roll-a-door type.

(c) Sliding doors on a track.

A single door can be placed in the narrow side of the shed so that planks can be slid in against the back wall.

Hooks A number of pegs or hooks about 4'6" from the floor for hanging ropes, hoses, etc. Hooks should curve up and inwards for safety.

Shelves A shelf about 2' or 3' wide and 3'6" high should extend along one side wall and back of building. Side shelf can be used for small equipment and back shelf will provide a work bench for staff use in repairing equipment. A high shelf or wall cupboard out of children's reach for storing paints, brushes and tools is a desirable addition.



Dulwich Wood Nursery School, London

Photo as it appeared
in "The Architect and Building News"
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Preschools and Primary Schools in Great Britain

The following excerpts are from The Plowden Report, Vol. I, Children and Their Primary Schools, a report of the Central Advisory Council for Education (England), reprinted here with the permission of Her Majesty's Stationery Office. The total report, begun in 1963, was finished in 1966 and presented to the Secretary of State by the Chairman of the Council, Lady Plowden.

A National Union of Teachers survey showed that more than half of all primary schools are used outside school hours. The more they are used by parents who understand what the schools are trying to do, and by the children themselves, the less interference there should be with day-time use.

There are, of course, difficulties which increase when buildings are modern and designed for children, and learning methods are informal. Rooms lead from one into another and it may not be easy to keep individual rooms out of use; paintings and clay models are carefully displayed; mathematical and scientific experiments must be left up until they are completed. A satisfactory solution might be to reserve the classrooms for school and after-school use by children, and to provide adequate storage for community purposes. A hut in the playground can be valuable. An additional parent-community room has already been built in some schools by parents and designed so that it is suitable for use both by adults and children. The hall and playing field can often be used by children and adults without difficulty. Evening use should not be allowed to disturb the day-time work of the school, and the school should have priority at least for part of the week for evening activities associated with it. It would be sensible to give the head teacher, as in some of the schools we saw in the U.S.A., and as in the Cambridgeshire village colleges, an overall responsibility for the school in the day and in the evening. It could be exercised, in schools which were heavily used outside school hours, by deputy heads, one primarily responsible for the day time, and one for out of school activities. . . . At the least, the head should have some voice in the evening use of his school, and managing bodies should interest themselves in it and represent the school's needs to the local education authority. (p. 46)

Battersea Park Road Primary School

London

Part-time attendance at a nursery school is desirable for most children. It is even more so for children in socially deprived neighborhoods. They need above all the verbal stimulus, the opportunities for constructive play, a more richly differentiated environment and the access to medical care that good nursery schools can provide. It will be many years before they are generally available. The building of new nursery schools and extensions to existing schools should start in priority areas and spread outwards. As a minimum we suggest that all children aged four to five who live in the areas should have the opportunity of part-time attendance and that perhaps 50 per cent should have full-time places (although their need for a gradual introduction is the same as that of all other children.) (p. 63)

Elizabeth Lansbury Nursery School, London

Photos this page Courtesy London County Council Photographic Library

Eveline Lowe Primary School London, S.E. 1

Photo by Freddie Squires, Ltd. made on behalf of Nairn Floors, Ltd., Kirkcaldy, Scotland

The nursery class has its own quarters and the children are playing with sand, water, paint, clay, dolls, rocking horses and big push toys under the supervision of their teacher. This is how they learn. There is serenity in the room, belying the belief that happy children are always noisy. The children make rather a mess of themselves and their room but this, with a little help, they clear up themselves. A dispute between two little boys about who is to play with what is resolved by the teacher and a first lesson in taking turns is learned. Learning is going on all the time, but there is not much direct teaching. Going out into the playground, the visitor finds a group of children, with their teacher, clustered round a large square box full of earth. The excitement is all about an earthworm, which none of the children had ever seen before. Their classroom door opens on to the playground and inside are the rest of the class, seated at tables disposed informally about the room, some reading books that they have themselves chosen from the copious shelves along the side of the room and some measuring the quantities of water that different vessels will hold. Soon the teacher and worm watchers return except for two children who have gone to the library to find a book on worms and the class begins to tidy up in preparation for lunch. (p. 103)

Our recommendations are, in summary, that expanded nursery education should be available for children from three to five in "nursery groups" of 20 places. Two or three groups might make one unit—to be called a "nursery centre"; or they might be combined with day nurseries or clinics in "children's centres." We believe that groups should always be under the ultimate supervision of a qualified teacher, but that the main day to day work should be undertaken by two year trained nursery assistants, of whom there should be a minimum of one to every ten children. (p.121-22)

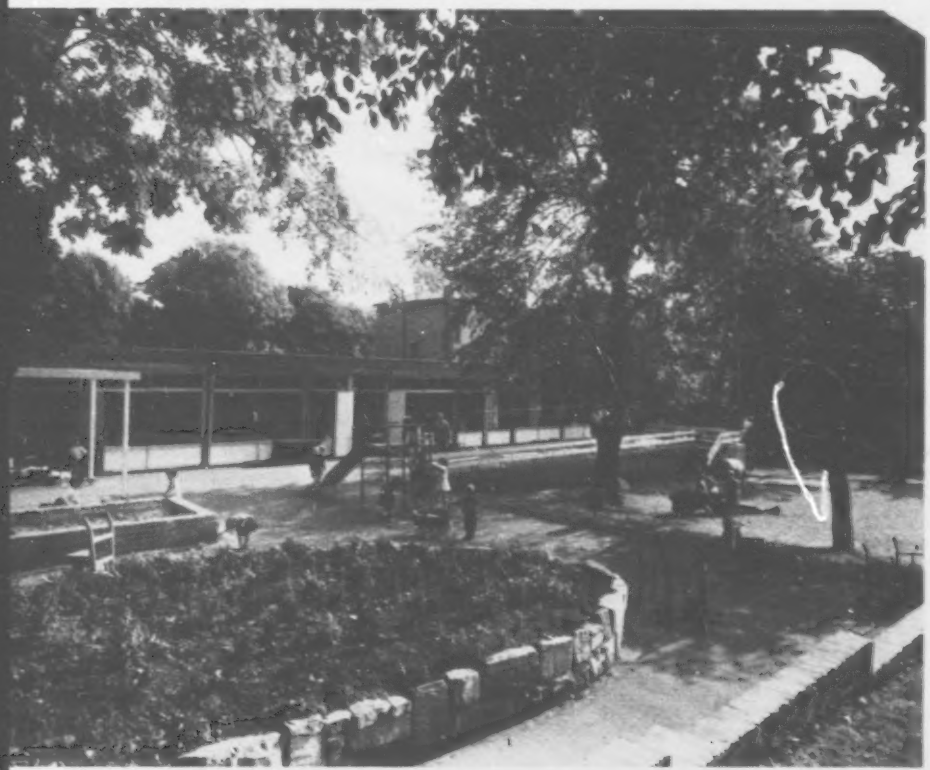
Elizabeth Lansbury Nursery School, London

Photos pages 80 and 81
courtesy London County Council
Photographic Library

Battersea Park Road Primary School

Since industry would benefit from an expansion of nursery education because labour will be easier to recruit . . . factories might provide premises for a group which can then be maintained by the local education authority. In new housing development, particularly in blocks of high flats which increasingly are being built in the cities, space should be left for nursery education. The planning of accommodation for nursery groups should become as much a commonplace in the development of new areas as that of other community facilities, although we hope that their siting will be undertaken with more sensitivity to users' needs than is common at present. Nursery groups will need to be in addition to the play centres and "one o'clock clubs" which cater all the year round for children and their mothers and which are part of the amenities of a district. The needs of young children for spaces where they can play safely with other children and yet be near enough to be in constant contact with an adult have been too often forgotten in post-war urban development. The planners have accepted, in recent years, that a family must have a space for a car, but few have considered the needs of preschool children. (pp. 125-26)

Playgrounds have been and are too often wasted. We think that working areas inside schools should be extended by covered space out of doors. Playgrounds should provide the opportunities for a similar range of activities out of doors to those allowed for by new types of school buildings indoors. There should be quiet corners where children can sit and read, parts left wild, and "dens" for group play: there should be challenges to physical activity as well as space for ball games. Imaginative use should be made of natural features, such as changes of level and trees. (pp. 398-99)



Highgate Nursery School, London

Photo, Courtesy London County Council Photographic Library

Here and There Abroad

A kiva in the Eveline Lowe Primary School, London

Carpeted floor and steps to the surrounding bunks make comfortable seating for listening children.

Photo courtesy Bond Worth, Ltd. London

Japanese children use cargo nets for climbing at the experimental kindergarten in Hiroshima

The clay table is a center for activity in a kindergarten at Turku, Finland

Children sit on wooden mushrooms round a rustic table in a kindergarten, Stockholm, Sweden

Inside this play house, which can be climbed outside, is a livingroom with table and chairs and stairs to a child-height second-floor bedroom.

University Nursery School
Oslo, Norway

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